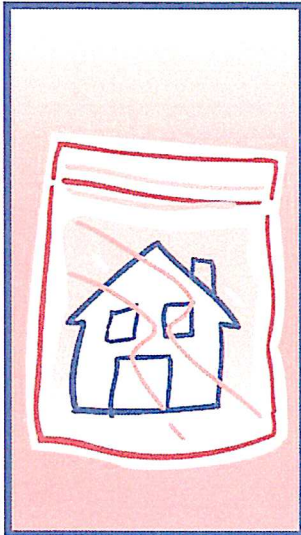




Encapsulants:

A Technique to Control Lead Paint Hazards



Lead-based paint is a health hazard to children and adults, because the dust chips and fumes can be ingested or inhaled. In 1978, the U.S. Consumer Product Safety Commission limited the amount of lead allowed in paint. Any surface painted before that year has the potential to be a lead hazard.

Lead paint hazards can be controlled in several ways: Doors and windows containing lead paint can be replaced, paint can be removed utilizing a method that minimizes dust and fumes, or surfaces can be covered with hard materials, such as sheet rock or paneling.

The use of **encapsulants** is also available as a technique to prevent exposure to lead-based paint. The instructions and guidance of the manufacturers must be followed to test, prepare and apply these products.

What are encapsulants?




- Encapsulants are materials that are applied over lead-based paint to seal the paint to a surface and prevent the release of paint chips or dust. The material may be either a liquid or an adhesive. Encapsulation provides a barrier between the paint and the environment. *Conventional paint is NOT an encapsulant.*

How do encapsulants work?

- Encapsulants cover lead paint so that the paint cannot produce dangerous dust, and humans cannot come into contact with it.
- Encapsulants work best on clean, dry and solid surfaces.
- Encapsulants cannot be used on:
 - Surfaces which are walked on;
 - Surfaces which rub together;
 - Surfaces which are badly deteriorated.

Are encapsulants all the same?

There are three types of encapsulants:


- There are polymers (chemical compounds) that form a flexible, resilient membrane. They are applied with a brush, roller, or airless spray gun. 
- There are epoxy or polyurethane polymers that form a membrane with a hard, but flexible, surface. They are applied with a brush, roller, or airless spray gun. 
- There are cement-like materials with polymers which cure to form a thick coating. They are generally applied with a trowel. 

How do I decide to use an encapsulant?

There are several points to consider before using an encapsulant:

- You must follow the manufacturer's guidelines for testing, preparation and application. The person performing the on-site testing to determine appropriate surfaces for encapsulants must meet standards set by the manufacturer.
- Although encapsulants offer permanent protection from lead-based paint, they must be periodically inspected and repaired, if damaged.
- You must use different encapsulants in different situations. Follow the manufacturers' recommendations and instructions.
- Encapsulation, or any other measures used to control conditions related to lead poisoning, **must have prior approval by the state or local department of health.**
- When covering lead paint, some thicker encapsulants may also destroy architectural detail, especially on moldings.
- Encapsulants must be applied by a person who has met the manufacturers' specifications. Contact the manufacturer for specific criteria.
- The only permanent solutions which do not require periodic maintenance and inspection include replacement of doors and windows, or complete removal of lead paint.

How do I find out which encapsulants are acceptable for use in New York State?

- Call your local health department or the state Department of Health's Residential Lead Hazard Control Unit at 518-402-7600 or 1-800-458-1158. 
- The state Health Department issues an "Acceptable Encapsulant Product List." Consult the list for encapsulant product names. Products on this list meet the safety and performance standards of the American Society for Testing and Materials Standard.

What surfaces are suitable for encapsulation?

The surfaces should be:

- Dry and free of grime, dirt, dust, grease, charring, smoke residue (especially cigarette or hydrocarbon), mildew, or other contaminants. Water-based encapsulants will tolerate damp, but not wet, surfaces without losing their most important properties.
- Free of water leaks.
- Non-glossy. High gloss surfaces can be deglossed with chemical deglossers or wet sanding before encapsulation.
- In architecturally sound condition.
- Undamaged (i.e., no holes or large cracks in walls). Damaged areas must be repaired prior to encapsulation.

What surfaces are not suitable for encapsulation?

- "Friction" and high profile (i.e., protruding window sills) surfaces are not suitable, regardless of their condition. Friction surfaces include: window jambs; glides; headers; some stops and parting beads; inside, close-fitting door jambs and stops; floors; stair treads; and thresholds. Cabinets with friction surfaces, such as drawers and cabinet doors, should be examined before encapsulation. Where friction exists, planing of the surfaces is recommended.

What are the advantages of using encapsulants?

- Residents may not need to leave the building during surface preparation and application if no dust is released. Occupants should never be in the immediate work area (i.e., same room) during application.
- If a surface with lead paint is intact, it may be possible to apply an encapsulant without surface preparation.
- Use of encapsulants may be less costly, more timesaving, and safer than other methods.

What are the disadvantages of using encapsulants?

- There is limited experience or information on long term performance of encapsulants.

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What are the disadvantages of using encapsulants?

- There is limited experience or information on long term performance of encapsulants.

- Encapsulants cannot be used on surfaces that experience abrasion or constant friction.
- Encapsulants may prematurely wear on a surface that experiences repeated impact, such as door stops, window stops and stair treads.
- Encapsulants may peel off improperly prepared surfaces that have old undercoats of paint.
- It is essential to test an encapsulant on-site before applying.
- Encapsulants require periodic inspection for repair or maintenance.
- Water from roof leaks or broken pipes may damage encapsulants.
- Encapsulants must be applied when the air temperature and relative humidity are within specified ranges.

**GET AHEAD
OF LEAD!**

For more information, contact your local health department; or call the **New York State Health Department Center for Environmental Health** at 518-402-7600 or 1-800-458-1158.



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What You Need to Know About Working with Lead-Based Paint



Homes or apartments built before 1978 may contain lead paint. Exposure to lead-paint dust or chips can cause serious health problems. Children and pregnant women are at higher risk.

If you own rental property, it is your responsibility to repair chipping or peeling lead painted surfaces. It is important to assess the need for repairs every year or when a new occupant moves in. The owner is responsible for all monitoring and maintenance activities.

If you rent and have peeling, chipping paint, you should contact your landlord about repairing the painted surfaces.

Whether you are the person doing the repairs or you are hiring a worker or contractor, it is important to do the work properly so as not to create new risks for lead exposure.

WORKERS AND CONTRACTORS

The US Environmental Protection Agency (EPA) mandates that any contractor or worker who performs renovation in a pre-1978 apartment, school or facility (including private homes) must be trained and certified in EPA Renovation, Repair, and Painting (RRP).

Who must be certified?

Anyone who is paid to perform work that disturbs lead-based paint in homes, child-care facilities and pre-schools built before 1978. This may include, but is not limited to, residential rental property owners, general contractors, painters and special trade contractors (such as, plumbers, carpenters, and electricians).

How does a person become certified and where can I find a list of certified firms?

Information about EPA-approved training providers and certified renovators is available online at www.epa.gov/lead/renovation-repair-and-painting-program.

What activities are subject to the Lead Renovation, Repair, and Painting Program?

Any activity that disturbs more than six square feet of lead paint

per room for interior activities or more than 20 square feet on any exterior surface. US EPA regulations require that prior to starting work, contractors must provide occupants with a copy of the Renovate Right pamphlet, available in English and Spanish (see more information at end of brochure).

Federal regulations also require using EPA-certified contractors to perform most lead remediation work ordered by government agencies. The owner or contractor needs to clear the remediation method with the agency before beginning the project.

HOMEOWNERS

As a homeowner, you can choose to do the work yourself. Only those people who are paid to do the work are subject to the federal rule and are mandated to receive the proper training. But anyone who does the work must ALWAYS use lead safe work practices. During the work, you might stir up dust or create fumes containing lead. This can be very dangerous for adults, children and pets. Always use a method that creates the least amount of dust and fumes.

IF YOU ARE GOING TO DISTURB LEAD-BASED PAINT FOLLOW THESE PRACTICES:

- Children and pregnant women must not do any lead paint removal work, and they should stay out of the work area until clean-up is complete. (See "Clean-Up" section.) If you're not sure you can clean up every day, arrangements for temporary living quarters should be made.
- Work in one room at a time, and seal off the work area from the rest of the house, including any heating or ventilation ducts, using heavy plastic sheets (6-mil thickness).



What you should know about lead testing...

Children who may have been exposed to lead-based paint should have a blood test to see if they have elevated blood levels. All children one and two years of age, or who may have been exposed, should be tested. Other children under six years of age, or who may have been exposed, should be tested if their doctors think they are at risk.

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'Stabilize Paint'

Paint film stabilization is a way to temporarily fix loose paint by creating a smooth surface that generates less lead dust. First, wet the area with a spray bottle and water before scraping or sanding. Then, prime and re-paint, and clean up thoroughly (for more detail, see EPA resources).

How to make your repairs last:

'Create a Durable Barrier'

One way of reducing exposure to lead paint is to cover the surface with a new surface—often known as enclosure. This can be achieved by putting up drywall or by covering windowsills with vinyl or aluminum, for example. This doesn't require the removal of the lead paint, so this is often the easiest solution. Be careful sealing all edges, joints and seams to create a dust-tight seal. If the new surface is ever removed or damaged, the lead problem returns. Materials used to enclose lead-painted surfaces should be durable and fire resistant, such as sheet rock or drywall, aluminum, vinyl siding, wood paneling, new flooring, or tile.

'Use a Coating that Lasts'

Adhesive coating, also known as encapsulation, is a technique that bonds materials to the existing painted surface. It is more than just a coat of paint, in that the thick coating is bonded to the lead paint. It is important to follow product instructions exactly to be sure that a strong, long lasting bond is created.

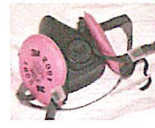
'Replace those Old Parts'

Replacement is the process of removing building components and installing new components that do not contain lead. This method is a common option when replacing components such as windows, doors, railings, cabinets, and trim.

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- EVERYTHING in the room (furniture, rugs, carpets, floors, bedding, drapes, dishware, food, toys, etc.) must be removed, or covered with TWO sheets of plastic (6-mil) and all the seams taped. Plastic used to cover the floor should be secured to the wall or baseboard with duct tape.

- Wear disposable coveralls, shoes, hair covering, goggles and a properly fitting respirator.



- Only HEPA (High Efficiency Particulate Air) respirators will filter lead dust and fumes. Simple paper or fabric dust masks will NOT protect you from lead dust.
- To avoid ingesting lead, do not eat, drink or smoke while working.

- Clean up carefully. Before leaving the work area, dispose of coveralls, and remove dust from your clothes with a HEPA filtered vacuum cleaner. Shower as soon as you can, so you do not spread lead dust around your home or elsewhere.

METHODS TO REDUCE OR REMOVE EXPOSURE TO LEAD-BASED PAINT:

There are many ways to reduce the hazards of lead-based paint – but SOME METHODS OF REMOVING PAINT ACTUALLY INCREASE THE RISK OF LEAD EXPOSURE. It's important to pick the safest method for your project. The goal is to reduce the hazard while creating as little lead dust as possible.

How to make your home lead-safe:

'Control Dust'

To control lead dust, regularly check all painted surfaces of your home for chipping or peeling. Look carefully at painted areas that rub together, like doors, windows, and stairways. If you see dust and chips, wet clean with damp paper towels or mop often. Other dust control methods for friction surfaces include carpeting stairways and installing window wells or window track liners.



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'Remove Old Paint'

This technique is a complete removal of all leaded paint from the underlying surface. There are several ways to remove lead-based paint:

- **Wet scraping:** surfaces are misted with water while using hand scrapers to dislodge the paint
- **Wet sanding or power sanding with a HEPA filter vacuum:** wet sanding sponges are used to minimize dust or an electric sander is equipped with a HEPA filtered vacuum attachment
- **Heat removal:** using a low temperature heat gun below 1100°F, followed by hand scraping



NEVER use these methods: Open flame burning, machine sanding without a HEPA attachment, abrasive sand blasting, and power washing without a method to trap water and paint chips.



CLEAN-UP

It is very important to do a proper cleaning of lead dust and debris after any work is done. Cleaning ensures that lead hazards are not left behind at the end of the day or end of the project. The work areas should be wet cleaned daily, by misting and collecting debris in 6-mil plastic bags followed by using wet cloths

or wet mops on all surfaces. Homeowners can dispose of debris along with household trash.

At the end of the project, use a HEPA-filtered vacuum on all surfaces (floors, walls, ceilings, woodwork, carpeting, furniture). Then wet mop hardwood surfaces and clean other surfaces with wet cloths. The final step is to do another HEPA vacuuming of the entire work area.

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MONITORING AND MAINTENANCE

It is important that all occupants and owners keep checking all lead-painted surfaces to make sure that temporary controls are working. Make necessary repairs to ensure they stay in a safe condition.

FOR MORE INFORMATION

Call the New York State Health Department
Center for Environmental Health:
518-402-7600 or 1-800-458-1158

Or visit the New York State
Department of Health Website:
www.health.ny.gov/environmental/lead/

Other useful resources for Homeowners or Contractors
U.S. Environmental Protection Agency's Lead Webpage:
www.epa.gov/lead

U.S. Environmental Protection Agency's Renovate Right Pamphlet:
www.epa.gov/lead/renovate-right-important-lead-hazard-information-families-child-care-providers-and-schools

New York State Department of Labor:
www.labor.ny.gov/home/

Call your local health department for additional information or for help in identifying qualified contractors experienced in lead removal.

Follow us on:
health.ny.gov
facebook.com/NYSDOH
twitter.com/HealthNYGov
youtube.com/NYSDOH



What Can I Do To Protect My Family From Lead?

- Keep children away from paint chips and lead dust.
- Damp mop floors and clean surfaces with wet cloths to keep dust down, especially window wells.
- Wash your child's hands often—before eating and napping.
- Wash household toys often, paying particular attention to teething toys.
- Keep children out of the home when painting, scraping or sanding is being done.
- Make sure your dishes are lead-free and discard any that you are not sure are safe.
- If your hobby uses lead, such as making fishing sinkers and bullets, keep away from children.

Feed your family nutritious foods that are high in iron and calcium such as dairy products, peas, beans and meats, such as beef, turkey and lamb.

Schenectady County Public Health Services



Environmental Health
Schaffer Heights
107 Nott Terrace; Suite 300
Schenectady, New York 12308

Phone: 386-2818
Fax: 386-2822

E-mail: john.frame@schenectadycounty.com

Schenectady County Public Health Services

Childhood Lead Poisoning Primary Prevention Program



Protecting Schenectady County residents in the 12303, 12304, 12307 and 12308 zip codes from lead poisoning

Schenectady County Environmental Health Unit

386-2818

Schenectady County Childhood Lead Poisoning Primary Prevention Program (CLPPPP)

Are you living in 12303, 12304, 12307 or 12308 zip code areas?

If you are, this message is for you.

Schenectady County Public Health Services CLPPPP grant has designated the above listed zip code areas of Schenectady as "high hazard areas" for lead based paint contamination.

You and your children may be at risk for lead poisoning.



The CLPPPP grant seeks to work with both property owners and tenants to identify problems with lead based paint and correct them before illness can occur.

Don't wait until it's too late. It's important to protect your family before you become ill. Lead poisoning can affect your child's growth, behavior and ability to learn. Lead can also cause for your baby before he or she is born.

What can I do?

- Get your children tested for lead and discuss the results with your doctor or the Health Department.
- Keep kids away from areas with chipping and peeling paint and have the areas repaired quickly.
- Frequently damp mop living areas to reduce lead dust contamination.
- Wash hands frequently.
- Call for more information at 386-2818.

How can I get rid of lead in my home?

The first thing is to have your home or apartment tested for lead. The CLPPPP grant will test properties in the 12303, 12304, 12307 and 12308 zip code areas for free. If lead based paint hazards are found, the grant also works with the City of Schenectady Lead Safe Housing Program and other community partners to correct the lead hazards.

Partners Working Together

Schenectady County Public Health Services will be working with several agencies to identify, repair and provide funding to make homes in the county lead safe. Involved partners include:

Healthy Schenectady Families, Schenectady County Healthy Neighborhoods Program, and the Schenectady City Lead Hazard Remediation Grant.



So get ahead of lead in your home and protect your child's health and well being.

Call 386-2818 today for more information.

Schenectady County Public Health Services

Environmental Health
Schaffer Heights
107 Nott Terrace, Suite 300
Schenectady, New York 12308
Phone: 386-2818
Fax: 386-2822

Other Community Partners



Schenectady County Public Health Services Clinic
518-346-2187

Ellis Medicine Family Health Center
518-347-5113

Please join the Schenectady Lead Safe Housing Program in the fight against lead poisoning! For more information on keeping your family safe, call 518-386-2824

Together we can make a difference!

Schenectady Lead Safe Housing Program

107 Nott Terrace, Suite 304
Schenectady, NY 12308
Phone: 518-386-2824
Fax: 518-382-5418
Email:

valleen.blanchet@schenectadycounty.com

A partnership between the City of Schenectady and the County of Schenectady
Funded by the Federal Department of Housing and Urban Development



SCHENECTADY LEAD SAFE HOUSING PROGRAM

518-386-2824



For Homeowners & Owner Investors



Schenectady Lead Safe Housing Program



518-386-2824

What can we do for you?

The Schenectady Lead Safe Housing Program has new grant funds to:

- Inspect & fix lead hazards in homes in the City of Schenectady
- Provide free finger stick lead testing for children.

Who is eligible?

- Investor Landlords in the City of Schenectady whose tenants are low income.
- Owner— Occupied homes in which a pregnant woman lives or a child under 6 years lives or frequently visits.
- Vacant properties.

Possible Warning Signs of Lead Poisoning

Hyperactivity • Irritability • Learning disabilities • Behavior problems • Loss of appetite • Growth problems • Hearing damage

Frequently Asked Questions

Do you think there is lead in your home?

- If your house was built before 1978, you probably have some lead in your home.

Can my child get poisoned even if he/she doesn't actually eat paint chips?

- Yes, most cases of childhood lead poisoning are caused by lead dust as a result of hand-to-mouth contact.



518-386-2824

To protect your children from lead poisoning



- Get your child tested for lead even if he/she is healthy.
- Have your home tested for lead.
- Do not try to remove lead-based paint yourself – hire a professional and get questions answered before you remodel.
- Do not let your kids play near (or eat) paint chips.
- Repair peeling paint or chipped paint surfaces.

Lead Paint Safety

A Field Guide for Interim Controls in Painting and Home Maintenance

U.S. Department of Housing and Urban Development
Office of Lead Hazard Control and Healthy Homes

WHO SHOULD FOLLOW THIS GUIDE AND WHY?



Maintenance and repair work on older homes (those built before 1978) can be very dangerous for you, the families who live in the homes you fix, and even your own family. Following this guide will help you lower lead-based paint exposure risks for you and the families, especially if you are a:

- Maintenance contractor
- Building maintenance staff
- Property manager or owner
- Homeowner hiring contractors or doing work on your own residences
- Local public housing agency staff
- Local public health agency staff
- Volunteer
- Contractor working on federally assisted housing

Why is knowing about controlling lead hazards important? Consider this case: A family purchased a two-family home built in the 1800s. The couple had two young boys, both less than 6 years old. As part of getting ready for them to move into the first-floor apartment, the parents repaired all deteriorated paint from it without considering lead dust control. After they moved into the first floor, they renovated the upper floor before renting it out, also without considering lead dust control, further exposing their children to lead. Both children were found to have elevated blood lead levels a year after they moved in. If the family had known and acted upon the information in this guide, they could have prevented the harm to their children.



Most Old Homes Contain Lead-Based Paint

- Half the homes built before 1978 contain some lead-based paint.
- Lead-based paint is more common and was used more extensively in homes built before 1960.
- Homes built before 1960 also used paint that had a higher concentration of lead.



WHEN SHOULD I FOLLOW THIS GUIDE?

In pre-1978 homes and child-occupied facilities:

- To address an identified lead hazard.
- During routine maintenance or apartment turnover.
- Where there may be a young child or a pregnant woman.
- During work supported by federal funds that must be performed using safe work practices under federal regulations.

Note: This manual is not a substitute for training in renovation techniques by skilled tradespeople, such as apprenticeship programs.

Poor Maintenance Endangers Children

- In poorly maintained homes, lead-based paint, which may be several layers down, flakes and peels off. Paint failure is often caused by moisture problems.
- Renovation, repair and painting jobs disturb paint that may contain lead. Doing work improperly can cause a lot of dust.
- Lead-based paint chips and dust then mix with house dust and build up on horizontal surfaces such as window sills and troughs, and on floors.
- Children are endangered when lead in paint chips, dust, and soil gets on their hands and toys, which they may put in their mouths and ingest. Lead dust may be breathed or swallowed. Even small amounts of lead can affect children and cause permanent brain and nerve damage. It can also result in learning difficulties and behavior problems. This damage is irreversible.
- If paint is kept intact and surfaces are kept clean, children can live safely in a home containing lead-based paint.

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- Uncontrolled or uncontained dust and debris from renovation, repair or painting that disturbs lead-based paint in a well-maintained home can also expose children to unsafe levels of lead that may be inhaled or swallowed.
- Flaking or deteriorating lead-based paint on a home's exterior can contaminate soil in the yard and be tracked into the home.

Lead-Safe Work Practices That Protect Workers and Children

- Lead-based paint can also pose a threat to workers by causing damage to their brains, and nervous and reproductive systems.
- Federal law requires renovation firms to be certified and renovators trained when working on homes and child occupied facilities built before 1978. Renovation firms must follow lead-safe work practices to protect themselves and their customers from lead exposure.
- These practices include:
 - Containing the work area.
 - Minimizing the dust.
 - Cleaning up thoroughly.
 - Verifying cleanup.

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1. THE BASICS

WORK PRACTICES OVERVIEW

The main steps of these projects are listed here.

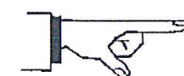
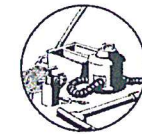
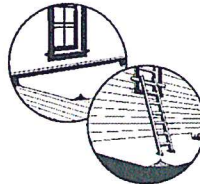
Correct the Cause of the Problem. Before work starts, correct the conditions causing damage to the home. See *Correcting the Cause of the Problem*, p. 9.

Set Up Work Area. Set up the work area properly. See *Set Up the Work Area – Interior and Exterior*, p. 15 and p. 18, respectively.

Clean Up and Clear. Thoroughly clean up the work area using the procedures described in this guide. Then, either wipe the surface and check for cleanliness or take dust wipe samples to see if it is safe for occupants to return. If federal funds are involved, clearance is required. See *Cleaning Up*, p. 51 and *Check Your Work*, p. 56.

High Dust Jobs. Some activities are likely to create high amounts of dust during the job. See *High Dust Jobs*, p. 49 and follow the guidelines in this section to ensure that this work is performed safely.

Important!! This symbol points out important details where special attention is needed.



6

PRINCIPLES TO REMEMBER

1. **ASSUME: Paint in Homes Built Before 1978 Contains Lead** (*Unless a lead-based paint inspection shows it doesn't.*) Exposing anyone to lead dust, especially children, is bad.
2. **CHECK: Federal, State, and Local Regulations**
 - Take the 8-hour Renovation, Repair, and Painting ("RRP") certification training course
 - Take appropriate refresher courses to keep your certification current
 - Ensure your firm is certified. All firms that disturb paint in older homes and child occupied facilities likely require certification
 - OSHA and some states have rules for worker safety
 - EPA (or your state government) has renovation, repair and painting ("RRP") rules, training requirements, and certification for contractors and firms
 - Your state or local government may have rules for waste disposal
3. **AVOID: Creating Dust**
 - Follow lead-safe work practices to minimize creating and spreading dust
 - Keep dust contained to immediate work area
4. **PROTECT: Occupants, Particularly Children**
 - Keep them away from work area
 - Clean up work site before they return

Workers

 - Wear proper respiratory protection for lead dust
 - Keep clean
 - Don't take dust home
5. **CLEAN UP: After All Work**
 - Clean up is particularly important if the job generates high amounts of dust, such as demolition, window replacement or opening wall cavities
 - At the end of the job, verify the area was cleaned adequately by either conducting cleaning verification – or taking and testing dust wipe samples to make sure that it is safe for occupants to return. If federal funds are involved, clearance is required

6. **MAINTAIN:**
 - All Painted Surfaces**
 - Well-maintained paint generally does not pose a health risk
 - Clean and Cleanable Surfaces**
 - Keep floors and painted surfaces clean
 - Damp mop them often
 - Clean rugs and carpet well

CORRECTING THE CAUSE OF THE PROBLEM

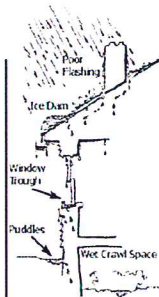
If a job involves repairs to a damaged paint surface, it is important to correct the cause of the damage, or the damage will occur again. Damaged surfaces that contain lead-based paint represent a health threat to the occupants.



The following conditions are examples of potential causes of damage to painted surfaces. Be sure that the planned work will correct these conditions if they are present.

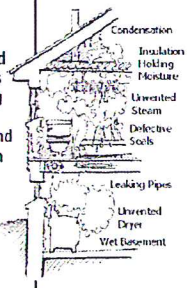
Moisture From Outside

Roof leaks; incorrectly installed flashing; defective downspouts and gutters; water collecting in window troughs; puddles of water at foundations; leaking basement walls; wet crawl spaces.



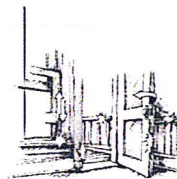
Moisture From Inside

Attic condensation due to poor ventilation; unvented steam from showers and cooking; leaking plumbing and failed seals around tubs and toilets; condensation in walls; unvented dryers; wet and poorly maintained basements.



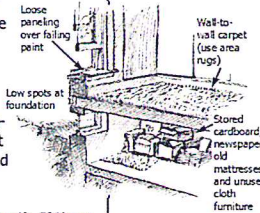
Rubbing and Impact of Painted Surfaces

Sticking doors; unprotected painted walls and trim; and rubbing from opening and closing painted windows.



Places that Collect Dust and Paint Chips

Where feasible, repair or remove places where dust and paint chips may accumulate and can't be easily cleaned (such as old wall-to-wall carpet and unused items stored in the basement). If these places are damp, they may also be home to mold. Keep flat surfaces (such as window stools or interior sills and troughs) clean and cleanable.



Structural Damage

Some surface damage may be caused by structural damage, such as wood rot, termite infestation, foundation settlement, and foundation shift. These problems must be addressed before surface repairs are made.

RESTRICTED PRACTICES
Goal: Don't use unsafe work methods. Some work methods create such high levels of dust that they are prohibited from use when working on surfaces that may contain lead-based paint. The following work practices are prohibited by both HUD and EPA. Additional practices are prohibited in federally assisted work by HUD, see p. 12.



Don't Use Power Sanders, Needle Guns or Grinders without a High Efficiency Particulate Air (HEPA) Vacuum Attachment.

These machines create a lot of dust that can contaminate a building and the ground around a building endangering workers, neighbors, and occupants.



Controlled Sanding, Needle Gunning or Grinding with HEPA Vacuum Attachment Is Acceptable.

If the sanding or grinding machines are "shrouded," which means surrounded with a barrier that prevents dust from flying out around the perimeter, AND attached to a HEPA vacuum, they can be used if no visible dust or release of air occurs. It is recommended workers wear properly rated respirators, such as an N100, R100, or P100, identified in RRP training. Respirators may be required based on the amount of dust created. See *Glossary*, p. 62.



Don't Use Open Flame/High Heat Removal of Paint.

There is no acceptable use of an open flame torch or high temperature heat gun (above 1100 degrees F) to remove paint.

- It produces toxic gases that a HEPA dust canister on a respirator cannot filter out on its own (a second, organic filter is necessary).
- It creates high levels of very toxic dust that is extremely difficult to clean up.
- It can burn down a house.



Don't Use Uncontrolled Abrasive Blasting (Sandblasting).

This work method can also spread paint chips, dust, and debris beyond the work area. This result makes it difficult to clean up these hazards at the end of the job.



Contained Blasting Is Acceptable.

Contained abrasive blasting within a protective, locally exhausted enclosure to prevent the spread of paint chips, dust, and debris may be used. Because this method requires additional precautions that are beyond the scope of this guide, it should only be used by certified lead abatement workers.



Avoid Extensive Dry Scraping or Sanding.

Extensive dry scraping or sanding creates large amounts of paint chips, dust, and debris that are hard to contain.



Use Wet Methods or Limited Dry Scraping and Sanding.

Mist surfaces before scraping and sanding. Continue to mist while working. Dry scraping or sanding of very small areas (for example, around light switches or outlets) may be done if flat surfaces below these areas are covered with protective sheeting. These methods should be avoided on areas larger than 2 square feet per room, and workers must have adequate respiratory protection.



Do Use a Heat Gun on Low Setting.

A heat gun set below 1100 degrees F may be used with caution. It is recommended for small areas only, such as the edge of a door, the top of a window stool, or the friction surface of a window jamb.

Additional activities are prohibited by HUD; these prohibitions do not apply to work that is not federally assisted.



Don't Use Paint Strippers Containing Hazardous Chemicals.

Many paint strippers contain hazardous chemicals. For example, strippers containing methylene chloride should not be used because this chemical is extremely toxic and is known to cause cancer.



Paint Strippers without Hazardous Chemicals Are Acceptable.

Chemical paint strippers without hazardous chemicals, such as methylene chloride, are safer to use, as long as the precautions printed on the container are followed. Take extra precautions to mask areas near stripping.



Don't Use Uncontained Hydroblasting.

Removal of paint using this high-pressure water spray method can spread paint chips, dust, and debris beyond the work area. This result makes it difficult to clean up these hazards at the end of the job.



Contained Pressure Washing Is Acceptable.

Removal of paint using contained pressure washing within a protective enclosure to prevent the spread of paint chips, dust, and debris may be done. Because this method requires additional precautions that are beyond the scope of this guide, it should only be used by certified lead abatement workers.

KEY STAGES OF A JOB

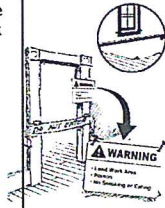
Quality work requires thinking through the job from start to finish. Here are the basic stages of the jobs described in this guide.

- | | |
|--------------------------|---|
| Before Starting | <ul style="list-style-type: none"> • Find the causes of damage • Test to determine if lead paint is present or assume lead paint is present and adhere to all lead safe work practice requirements • Prioritize work • Hand out the Lead-Safe Certified Guide to Renovate Right pamphlet (see p. 70 for more information) |
| Work | <ul style="list-style-type: none"> • Set up work area <ul style="list-style-type: none"> - Separate work space from occupied space - Isolate high dust areas • Correct cause(s) of problem(s) • Complete the job using safe work practices, such as those shown in this guide |
| Finish the Job | <ul style="list-style-type: none"> • Clean up thoroughly • Dispose of waste safely and according to federal and state requirements • Check quality of work and correct problems |
| Maintain the Work | <ul style="list-style-type: none"> • Educate occupants about risks from lead-based paint • Maintain the paint in good condition |

2. BEFORE YOU START WORK SET UP THE WORK AREA — INTERIOR

Restrict Access

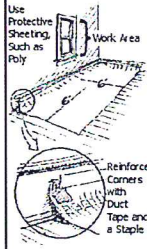
- Have occupants leave the room where work will be done (pets included).
- Have them stay out until the job is done.
- Place 'Warning: Lead Work Area' sign in the language of the occupants.



Caution: If the work will create a large amount of dust, follow the guidelines on High Dust Jobs, p. 49.

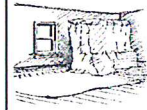
Protect Floor

- Cover the floor with taped down plastic sheeting extending at least 6 feet from the area paint is being disturbed or a sufficient distance to contain dust, whichever is greater. The area where the floor is covered is the work area.



Protect Furnishings

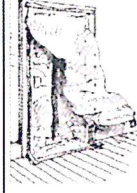
- Remove objects from the work area (e.g., drapes, curtains, furniture, and rugs).
- Cover and seal objects that can't be removed with taped impermeable protective sheeting.



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Protect Furnishings (Cont)

- Close windows in the work area.
- Doors used to enter the work area must be covered with plastic sheeting in a manner that allows workers to pass through while confining dust and debris, see p. 50. All other doors in the work area must be closed and covered in plastic sheeting.
- Close and cover all duct openings in the work area with taped down plastic sheeting.



Stock the Work Area

- Put all necessary tools and supplies on protective sheeting before beginning work, to avoid stepping off the protective sheeting. For high dust jobs, see p. 49.



Prevent Tracking Dust

- To avoid tracking dust off the protective sheeting, wear non-skid shoe covers on protective sheeting and remove them each time you step off the protective sheeting.



OR

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Prevent Tracking Dust (Cont)

- Wipe both top and bottom of shoes with a damp paper towel each time you step off the protective sheeting.

OR

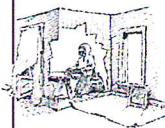
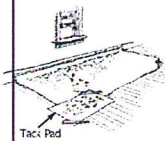
- Clean off the soles of shoes using a tack pad (a large sticky pad that helps remove dust).

OR

- Use a HEPA vacuum to clean off shoes and clothing prior to leaving the work area.

Set Up Dust Room (Optional)

- When working on components that can be moved, such as doors and window sashes, consider setting up a dust room to contain dust and paint chips. This is an isolated area where workers can do dust generating work and make clean up easier. See High Dust Jobs, p. 49.



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SET UP THE WORK AREA — EXTERIOR

Protect the Ground

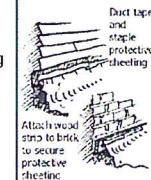
- Cover the ground with plastic sheeting extending at least 10 feet from the area paint is being disturbed or a sufficient distance to collect falling paint debris, whichever is greater.
- If the edge of the property is within 10 feet, then build a vertical containment or take similar precautions to prevent contamination of surrounding buildings and property.



Important: Covering the ground protects the soil from contamination by lead-based paint chips and dust.

Attach Protective Sheeting to Wall

- Protective sheeting can be taped and/or stapled to wood siding or ribbon board. A wood strip may need to be attached to a masonry wall.



Build Curb

- Build a curb around work perimeter when a sidewalk or another property is near, or when wind may blow debris off protective sheeting.

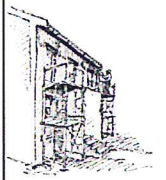
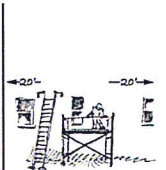


Caution: This may pose a tripping hazard.

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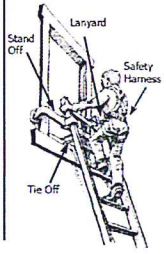
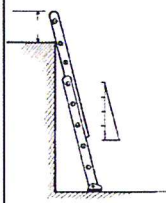
Cover Windows and Doors

- All windows and doors within 20 feet of the work area must be closed. If they cannot be closed, seal with protective sheeting during work.
- If an entrance must be used that is closer than 20 feet, place a shroud above and on the sides of the entrance that allows workers to pass through while confining dust and debris.



Construction Safety

- You should be concerned about other general construction hazards. Go to OSHA's website (www.osha.gov) to learn more about these and other construction safety topics:
 - Scaffolding
 - Fall protection
 - Ladders
 - Head Protection
 - Hazard Communication
 - Construction
 - Electrical
 - Slips, trips and falls



WORKER PROTECTION

Protect Your Eyes

- Workers should wear safety goggles or safety glasses when scraping, hammering, etc.



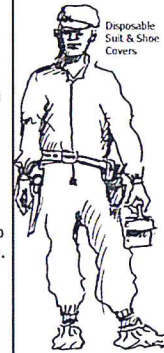
Keep Clothes Clean

- All personnel, tools, and other items must be free of dust and debris when leaving the work area.

OR

Use Disposable Covers

- At the end of every work period and each time you exit the work area, remove dusty clothes and/or HEPA vacuum off dust. Wash them separately. Do not use compressed air to blow dust off clothing.
- Wear disposable protective clothing covers. Disposable protective clothing covers can be stored in a plastic bag and reused if fairly clean and there are no rips. Small tears can be repaired with duct tape.
- Wear painter's hat to protect head from dust and debris.



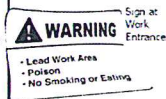
Wear Respiratory Protection

- When work creates dust or paint chips, workers should wear at least a NIOSH-approved respirator for lead work. See *Respiratory Protection*, p. 73.



Post Warning

- Post 'Warning: Lead Work Area' sign and avoid eating, drinking, or smoking on site.



Wash Up

- Wash hands and face each time you stop working.

3. DOING THE WORK

INTERIOR SURFACE PREP

PROBLEM: A wall or ceiling is sound, but has holes, uneven surfaces, or flaking and peeling paint.

SOLUTION: Prepare wall or ceiling to create a sound, intact surface for painting. Use methods that create a minimum amount of dust.

Set Up

- See *Set Up the Work Area - Interior*, p. 15.



Remove Deteriorated Paint

- Wet scrape any loose, peeling, or flaking paint.

Fill and Patch Holes

- If removal of damaged edges is necessary, mist surface before removal.
- Skim and fill holes and cracks less than 1/16-inch wide with a non-shrinking spackle compound.



Prep Surface

- Clean wall, particularly in kitchen area.

Prep Surface (Cont)



- De-gloss surfaces as necessary (Use liquid sandpaper or wet-dry sandpaper with water).



Important: Allow surface to thoroughly dry before priming.

- Prime surface using high-grade primer.
- Apply top coat. Use one or two coats as necessary.

Clean Up and Clear

- See *Cleaning Up*, p. 51 & *Check Your Work*, p. 56.



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EXTERIOR SURFACE PREP

PROBLEM: Exterior wood surface is chipping and peeling and may be painted with lead-based paint.

SOLUTION: Prepare a sound, intact surface for painting. Use methods that create minimal dust.

Set Up

- See *Set Up the Work Area - Exterior*, p. 18.



Clean Surface

- Clean wood with detergent (or lead-specific cleaner) and scrub brush.

Wet Scrape

- Wet scrape woodwork and siding. Mist small areas frequently to keep down dust. Using a pump sprayer in a knapsack is convenient.



Mist and Sand

- Wet sand using wet-dry sandpaper or wet sanding sponges. A power sander may be used if attached to a HEPA vacuum, and the worker is wearing respiratory protection.

Paint

- Prime and paint.

Clean up and Clear

- See *Cleaning Up*, p. 51 & *Check Your Work*, p. 56.

Dispose of Waste Water

- If you dislodge paint using pressure washing, water must be collected and may need to be tested before disposal (see local regulations for water disposal procedures in your area).

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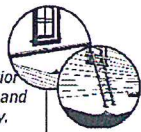
PAINT REMOVAL

PROBLEM: Areas of paint are peeling or flaking or there is evidence that a child has been chewing on a painted surface. An example of a surface accessible to children is the inside nose of a window stool (inside sill).

SOLUTION: Remove all paint using methods that do minimum harm to the surface, create minimal dust, and are safe for workers.

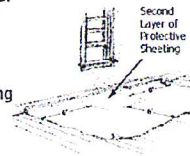
Set Up

- See *Set Up the Work Area - Interior & Exterior*, p. 15 and p. 18, respectively.
 - When using chemical strippers, the edge of the protective covering below the painted surface must be tightly fastened to the wall so that the stripper doesn't damage other surfaces.



Recommendations:

- Use a second layer of protective sheeting to collect stripping waste. The first layer remains in place to protect surfaces below.
- For removable components, consider having paint stripped off-site or installing an entirely new component.



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Chemical Removal

- If a large area of paint is to be stripped, consider hiring a professional.
- Follow the manufacturer's instructions carefully when using chemical paint strippers.
- Ensure there is lots of ventilation into the work area exhausting fumes to the outside.



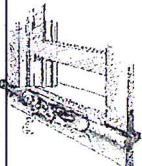
Caution: If using a caustic stripper, neutralize the surface according to the manufacturer's directions before applying new paint.

- After stripping paint from wood, a paint residue will remain in the wood. Use caution when sanding the bare wood because it may contain lead residue.



Hand Stripping

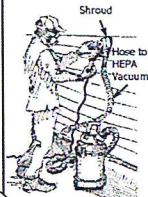
- Paint can also be removed with a paint scraper. Be sure to mist areas where paint is to be removed. Using a hand plane removes all paint and all residue. It also creates very little dust.



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Mechanical Stripping

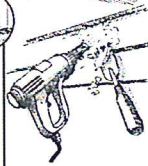
- When using power tools, such as sanders or grinders, to remove or feather paint, make sure the tool is shrouded and attached to a HEPA vacuum. Respiratory protection is still necessary.



Caution: High dust potential.

Heat Stripping

- When using a heat gun to remove paint, be sure the temperature setting is kept below 1100 degrees F.



Clean Up and Clear

- See *Cleaning Up*, p. 51 and *Check Your Work*, p. 56.

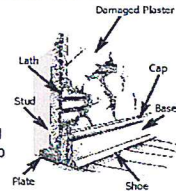


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DAMAGED INTERIOR WALL OR CEILING

PROBLEM: Wall or ceiling area is too badly damaged to repair, and demolition would create a large amount of dust.

SOLUTION: Install a new durable surface over the damaged area using methods that create little dust and do not require demolition.



Set Up

- See *Set Up the Work Area - Interior*, p. 15.

Cover with Drywall

- Mechanically fasten drywall or veneer board through damaged plaster to studs.
- Seal the perimeter, particularly the bottom edge.

On Base

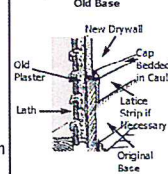
- Avoid removing existing base.



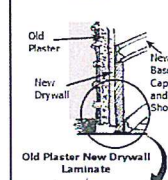
Caution: High dust potential.

- Where drywall laminate will end above existing base, install shoe or cove molding into bead of caulk to seal.
- If laminate comes close to flush with base face, a strip of lattice bedded in caulk can be used to seal joint.

Drywall Laminate Sits on Old Base



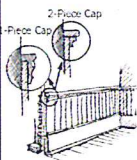
New Base Over Drywall Laminate



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Behind Base

- Where base will be replaced, bed the new base in a bead of caulk on the back and bottom. Then, bed shoe molding in a bead of caulk to seal.

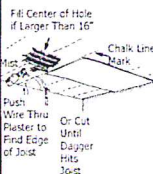


- Bed the lower edge in a bead of caulk with a trim piece also bedded in caulk.

- Finish top with cap molding.

Repair Holes in Ceilings

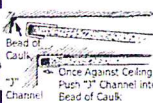
- When laminating drywall to ceilings, it is critical to screw into joists, not lath.



- Old joists may be irregularly spaced, so each joist center must be located.

- A drywall dagger can be used to find the joist edge, or a heavy gauge wire pushed through the plaster.

- The drywall edges should be taped and spackled.



- If walls will not be spackled, perimeter edges can be finished with "J" channel bedded in a bead of caulk.

Clean Up and Clear

- See *Cleaning Up*, p. 51 and *Check Your Work*, p. 56.



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DETERIORATED EXTERIOR SURFACES

PROBLEM: An exterior painted surface is badly damaged.

SOLUTION: Whenever possible, repair the surface, prep, prime, and paint exterior trim and siding, and then maintain the surface. This method is the preferred approach.

When a surface is too badly damaged to repair, install vinyl or aluminum siding, or aluminum wrap to create a safe, durable covering that protects the surface and does not cause further deterioration.

Note: Siding must be installed correctly, or wood rot and/or interior paint failure may occur. Siding may also become home to insects and mold. Correct installation is critical in both hot and cold climates.

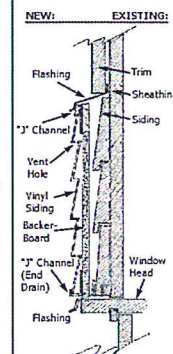
Cover Deteriorated Surface with Siding

Set Up

- See *Set Up the Work Area - Interior & Exterior*, p. 15 and p. 18, respectively.

Install Siding

- Carefully follow the manufacturer's instructions for installing siding over an existing surface.
- Use a styrene backboard with an insulation rating of at least R2.
- Take care to properly install flashing, especially at horizontal trim and window and door heads.



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Install Siding (Cont)

- The siding system must be well vented but sealed at the bottom to prevent flaking and peeling paint from falling from behind the siding to the ground.
- Be sure that water can drain out.



Important: The entire home should be well ventilated to prevent moisture build-up that can cause structural damage and/or paint failure.

Clean Up and Clear

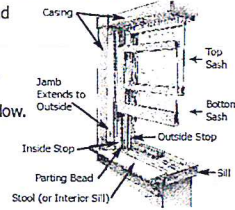
- See *Cleaning Up*, p. 51 and *Check Your Work*, p. 56.



STICKING WINDOW

PROBLEM: Window sticks, and paint on window is flaking.

SOLUTION: Remove window, scrape or plane, repaint, and reinstall, OR install a new window.

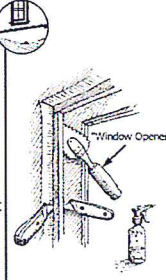


Set Up

- See *Set Up the Work Area - Interior*, p. 15.

Loosen Painted Sashes

- If window is painted shut, mist and cut window joint with utility knife. Then open joint between sash and stop with a "window opener." Mist while working.

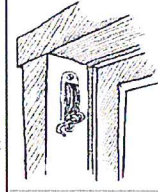


Remove Inside Stop Molding

- Mist and remove stop molding from sides and head. Dispose of properly unless it has historic value.

Remove Bottom Sash

- If counterweight cord or chain is attached to the sash, knot it or tie it to a stick when removing from sash so it does not get pulled into the weight compartment.



Remove Top Sash

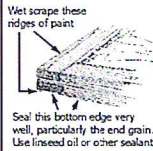
- Mist and remove parting bead. Then remove the top sash.

Wet Scrape or Plane

- Set sash on a work bench, clamp it, and wet scrape all surfaces. Or use a power planer attached to a HEPA vacuum.



Caution: High dust potential. This work can be done in a dust room. See *High Dust Jobs*, p. 49.



Repair, Re-glaze, Seal, and Paint

- Re-glaze and repair as necessary. Wet sand, prime, and paint sash and jamb. Seal, but do not paint sash edges.

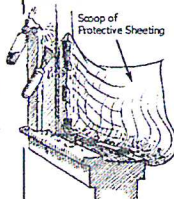


Important: Seal bottom edge of sash, particularly end grain.



Repair and Paint Jamb

- Repair jamb if necessary.
- To prevent dust and chips from falling outside the window, install a scoop of protective sheeting.
- Then wet scrape, prime, and paint.
- Reinstall sash with new or wet scraped and repainted stop and parting bead.



Clean Up and Clear

- See *Cleaning Up*, p. 51 and *Check Your Work*, p. 56.



LOOSE WINDOW

PROBLEM: Loose sashes (lower and upper) do not operate smoothly, and they allow heat loss. Also, sashes rubbing against a painted jamb create paint dust.

SOLUTION: Install sashes in window compression jamb liner to seal window and allow sashes to move easily without rubbing against jamb. If sashes or window components are badly deteriorated, replace window.

Install Window Jamb Liners

Set Up

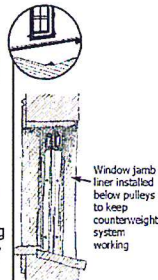
- See *Set Up the Work Area - Interior*, p. 15.

Remove Sashes and Paint

- Follow directions on p. 32.

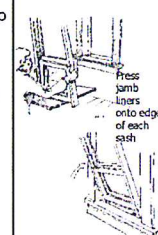
Cut Jamb Liners

- Cut liners to fit in jamb (1/4-inch short of dimension). If pulley system is being saved, cut off directly below pulley.



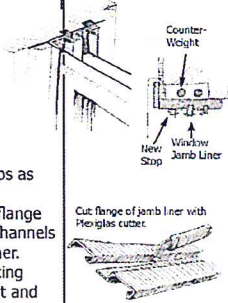
Install Jamb Liners

- Press jamb liners onto sash.
- Attach jamb liners with brass screws on top and bottom of each side.



Install Stop Molding

- Install new inside stop molding tight against jamb liner.
- If top sash is painted shut and is to remain fixed, adjust the above steps as follows:
 - Cut away flange between channels of jamb liner.
 - Leave parting bead intact and install bottom sash as above.



Choose an Option

Replace Sash/Window

- If the sashes or other components are too badly deteriorated to save, consider one of the following options:
 - Install new sashes in tilt-in jamb liners.
 - Replace sashes, stops, and parting bead with a vinyl or aluminum window unit.
 - Replace entire window including jamb casing, stool, and apron.

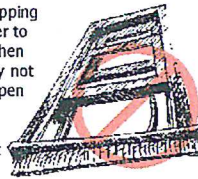


Clean Up and Clear

- See *Cleaning Up*, p. 51 and *Check Your Work*, p. 56.

WINDOW WON'T STAY OPEN

PROBLEM: Window sash is loose and won't stay up without support. Propping the window open presents a danger to occupants, particularly children. When a window jamb liner is used, it may not be sufficient to keep the window open (see p. 34).



SOLUTION: Repair counterweight system or install hardware so the window will stay open securely or replace window.

Set Up

- See *Set Up the Work Area - Interior*, p. 15.

Option #1: Reinstall Counterweight System

Open Counter-Weight Panel

- Find top of panel. Mist and scrape paint from top edge to find screw or nail holding in panel. Remove screw and pry off panel.

Vacuum

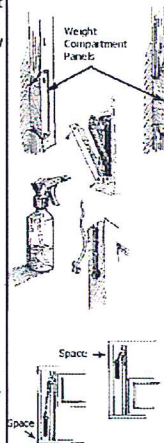
- Vacuum weight compartment with HEPA vacuum.

Remove Counter-Weight System

- Remove old rope or chain from counterweight and edge of sash.

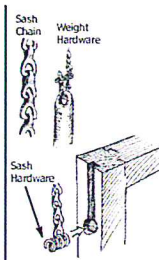
Reinstall Counter-Weight System

- Cut chain so weight is above bottom of weight compartment when open and weight is below pulley when closed.



Reinstall Counter Weight System (Cont)

- Drop chain over pulley into weight compartment, pull out through panel opening, and attach to weight.
- Attach other end to edge of window sash using spring fixture. You may want to secure chain with fence staple.



Option #2: Install Spring Clips

Install Spring Clips

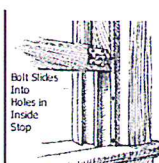
- Screw spring clips on to window as directions indicate (2 styles shown).



Option #3: Install "Hold Open" Hardware

Install Slide Bolt

- Screw slide bolt to bottom of window sash. Tap bolt to mark where you want to drill holes for bolt. Drill holes in inside stop at 3 or 4 points.



OR

Attach Hardware

- Attach hardware that uses spring to press against stop. To move sash, press lever. Release lever when window is at desired height.



Clean Up and Clear

- See *Cleaning Up*, p. 51 and *Check Your Work*, p. 56.



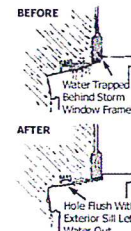
DETERIORATED WINDOW TROUGH

PROBLEM: Storm window traps water behind the frame causing paint deterioration and damage to the sill.

SOLUTION: Drill a drain hole through bottom of the storm window frame.

PROBLEM: Window trough surface is damaged and difficult to clean.

SOLUTION: Install smooth and cleanable surface in window trough.



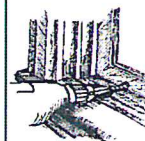
Set Up

- See *Set Up the Work Area - Interior*, p. 15.

Drill Drain Hole

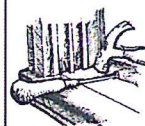
Drill

- To allow drainage, drill 2 holes through frame of storm window flush with sill. Drill holes approximately one quarter of the way from both sides. First, drill a 1/8-inch pilot hole, then the 3/8-inch hole.



Dent

- If flashing is installed in window trough and covers any part of the drain hole, run awl through drain hole. Tap with hammer to form dent in flashing to drain out water.



Wet Scrape

- To make surface flat, wet scrape high points and remove any fasteners from trough.



Cut

- Cut flashing 1/4-inch shorter than the width and length of trough.

Chisel or Notch

- To allow flashing to fit tight to jamb, drive chisel under parting bead and outside stop — or notch each side of the flashing at these two points.

Check Fit

- Then slide flashing in to check fit. Remove and trim if needed.

Fasten

- To fasten flashing, run bead of adhesive caulk around perimeter of trough.

Install Flashing

- Bed flashing in adhesive caulk bead and press down.

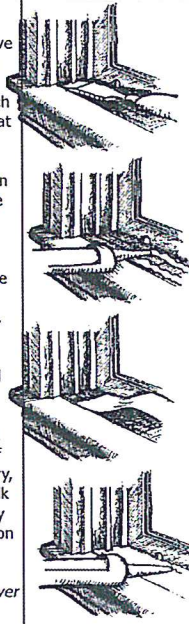
Seal

- Run a bead of caulk around perimeter of flashing. If necessary, wipe off excess caulk with damp cloth. Try not to smear caulk on face of flashing.

Clean Up and Clear

- See *Cleaning Up, p. 51* and *Check Your Work, p. 56*.

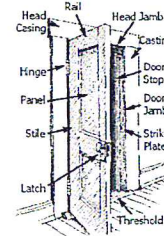
Important: Do not cover drain hole with caulk.



DOOR NEEDS ADJUSTMENT

PROBLEM: Edge of door is crushing against jamb on hinge side; or door is rubbing on latch side because hinges are loose. When paint on a door rubs or is crushed, dust and paint chips can result.

SOLUTION: Adjust the door so that it opens and closes without damaging painted surfaces.



Set Up

- See *Set Up the Work Area - Interior, p. 15*.

Check Door

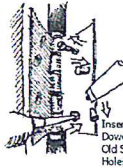
- Grasp knob and try to move door up and down. If hinges are loose, door will move.

Remove Screws

- Remove screws that are most loose, but not all screws, so door remains hung.
 - Clear paint from screw notch with hammer and small screwdriver.
 - Unscrew. If screw head is stripped, use screwdriver bit in a brace.

Fill Hole

- Drive 3/16-inch or 1/4-inch dowel into screw holes as necessary to fill each hole. Cut dowels flush.



Insert Dowel in Old Screw Holes

Install New Screws

- Replace screws. Use longer screws if necessary. Using a screwdriver bit on a brace makes this easier. Then remove and replace remaining screws as necessary.

Adjust Stop

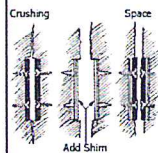
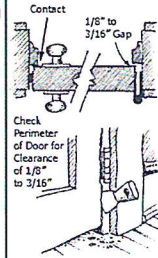
- Face of door should only contact the stop on the latch side of door frame. It should not crush or rub head or hinge side stop.
- Where stop is nailed, remove and replace with new matching stop. Leave 1/8-inch space between hinge, head stop, and the face of the door.

Check Clearance

- If putty knife can't fit in gap between door and jamb at all points, crushing of painted surfaces may be occurring.

Adjust Depth of Hinge Leaf

- If door is crushing hinge side and there is more clearance than necessary on the latch side, install metal shims behind hinge leaves. Keep at least 1/8-inch clearance on leaf side and 1/8-inch clearance on latch side. *If not enough clearance, see p. 43.*

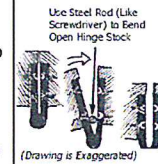


Adjust Depth of Hinge Leaf (Cont)

- If only a small increase is needed between leaves of hinge to create a gap between door edge and jamb, place a steel rod between hinge leaves near pin and close door to slightly bend apart leaves.

Clean Up and Clear

- See *Cleaning Up, p. 51* and *Check Your Work, p. 56*.




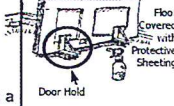
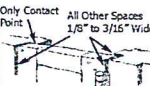
Use Steel Rod (Like Screwdriver) to Bend Open Hinge Stock
(Drawing is Exaggerated)

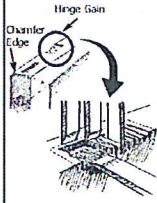


DOOR RUBS OR STICKS

PROBLEM: Door is scraping on latch side; or door is crushing jamb on latch side and there is not enough clearance on latch side to add shims to hinges. When paint on a door rubs or is crushed, dust or paint chips can result.

SOLUTION: Plane edges of door so that it operates smoothly and does not rub.


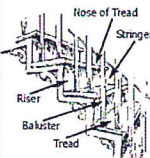



<p>Set Up</p>	<ul style="list-style-type: none"> See <i>Set Up the Work Area - Interior</i>, p. 15. 	
<p>Remove Hinge Leaves</p>	<ul style="list-style-type: none"> Remove pins from hinges and hinge leaves from door. Set door on edge in a door hold. Mist surface and hand plane a chamfer edge. 	
<p>Hand Plane Edge</p>	<ul style="list-style-type: none"> Use a smooth bench or jointer plane (not a block plane) to remove the rest of the paint from the edge. Continue to mist while working. If a power planer is used to remove paint it must be attached to a HEPA vacuum. Some power planers need an adaptor to accept HEPA attachments. 	

<p>Hand Plane Edge (Cont)</p>	<ul style="list-style-type: none"> Once paint is removed, use either a hand or power planer. 	
<p>Re-Cut Hinge Gains</p>	<ul style="list-style-type: none"> Then, re-cut hinge gains as necessary so hinge leaf is set about halfway into gain. 	
<p>Seal Edges</p>	<ul style="list-style-type: none"> Seal edges of door, particularly the bottom, and re-hang. 	
<p>Clean Up and Clear</p>	<ul style="list-style-type: none"> See <i>Cleaning Up</i>, p. 51 and <i>Check Your Work</i>, p. 56. 	

CHIPPING PAINT ON STAIRS OR FLOOR

PROBLEM: Painted staircase treads, risers or floors are worn, or the paint is chipping. Paint and other coatings used on staircases and floors in older homes often contain lead. Everyday friction and wear can produce paint chips and dust.

SOLUTION: Cover portions of stairs or floor that are worn with durable material.

<p>Set Up</p>	<ul style="list-style-type: none"> See <i>Set Up the Work Area - Interior</i>, p. 15. 	
<p>Stairs – Option #1: Install Tread Covers and Riser Enclosures</p>		
<p>Wet Scrape</p>	<ul style="list-style-type: none"> Mist and wet scrape any loose paint on treads and risers, particularly on edges. 	
<p>Prime and Paint</p>	<ul style="list-style-type: none"> Prime treads and risers. Paint edges that will not be covered by enclosures. 	
<p>Install Riser Enclosure</p>	<ul style="list-style-type: none"> Cut 1/4-inch lauan plywood to fit each riser. Sand exposed edges of lauan. 	
<p>Fasten</p>	<ul style="list-style-type: none"> Back caulk perimeter of riser with adhesive caulk. Press tight or nail with finish nails. 	
<p>If nose tread is not worn:</p>		
<p>Cut and Install Tread Cover</p>	<ul style="list-style-type: none"> Cut cover to fit over the tread and nose. Install cover with adhesive caulk or screws. 	

IF NOSE TREAD IS WORN


PROBLEM: Installing a rubber tread over a worn tread nose creates a hollow space under the rubber tread cover. This can cause the rubber tread cover to tear, posing a tripping hazard.

	SOLUTION: Install a tight-fitting nose tread, or install a staircase runner.		
Cut and Install Tread Cover	- Cut tread cover to fit from the riser to rear edge of nose. Install with adhesive caulk or screws.		
Install Metal Nose Cover	- Screw metal cover over edge of tread nose. It will span the worn area of the nose.		
Stairs – Option #2: Install Staircase Runner			
Wet Scrape	- Mist and wet scrape any loose paint on tread and riser, particularly on edges.		
Prime and Paint	- Prime and paint treads and risers.		
Install Runner	- Staple runner to top of top riser. Then fasten with staircase bars so runner may be easily removed for cleaning.		
Important: Do not install runner or tread cover on landing of upper floor where its rear edge may become a tripping hazard.			


Floors

Prep Surface

- If a floor needs to be refinished, use a floor sander attached to a HEPA vacuum.



Caution: High dust potential.




Cover

- Apply a coating to the floor to keep it smooth and cleanable.
- To maintain a smooth and cleanable surface, it is recommended that the use of wall-to-wall carpeting be avoided. Area rugs can be used instead.

Clean Up and Clear

- See *Cleaning Up*, p. 51 and *Check Your Work*, p. 56.



CHIPPED OR DAMAGED IMPACT SURFACES

PROBLEM: Outside corners of walls, edges at passages, as well as trim, base cap, and shoe molding are being chipped due to impact from doors, furniture, and other objects. If these surfaces are covered with lead-based paint, the paint chips and the dust created may pose a health threat.

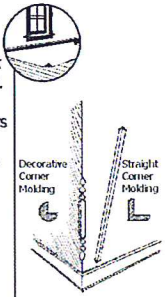
SOLUTION: Protecting these surfaces with a durable material can prevent the creation of paint chips and dust.

Set Up

- See *Set Up the Work Area - Interior*, p. 15.

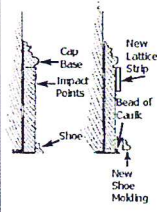
Enclose Outside Corner

- Cover outside corners of walls with corner molding. Attach with nails and/or with a bead of adhesive.




Protect Base

- In places where a baseboard shows signs of impact, replace shoe and protect cap with lattice strip.
- When replacing shoe, bed new shoe in bead of caulk to seal out moisture and prevent infiltration of dust.



Clean Up and Clear

- See *Cleaning Up*, p. 51 and *Check Your Work*, p. 56.



HIGH DUST JOBS

Some jobs create large amounts of dust. To be safe, workers doing this type of work should:

1. Wear half-mask respirators rated as N100, R100, or P100 (or HEPA) at a minimum and be trained to wear and maintain them or conduct air monitoring to show that they are not needed (see *Respiratory Protection*, p. 73).
2. Completely isolate the work space from occupied spaces and use containment to protect other workers (see next page).

Remember: All house dust is unhealthy to breathe. It may contain lead, mold, asbestos, gypsum, roach waste, dust mites, coal dust, fiberglass, etc.

Jobs that require containing an entire room or group of rooms are high dust jobs. The following types of work are likely to create high levels of dust:

Examples of High Dust Jobs

Demolition. Demolition includes tearing off siding and/or demolishing old plaster walls or ceilings.

Opening Up Wall Cavities. These jobs include:

- Removing old paneling, baseboards, or wood trim
- Removing door casings or frames
- Removing window casings, jambs, or frames

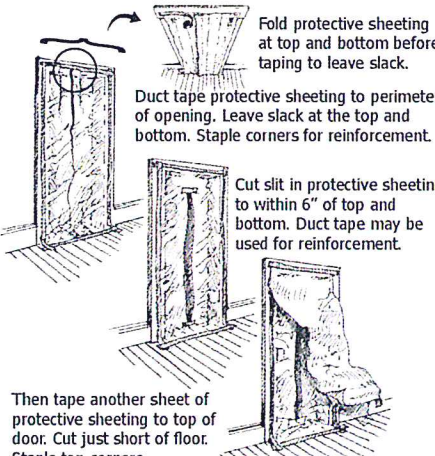
"It's not just what's on the wall, it's the dust inside it."

Removing Old Drop Ceilings. Lots of dust can accumulate above ceiling panels.

Improperly Removing Wall-To-Wall Carpet. A carpet that's been on the floor for many years has gathered large amounts of household dust, which may include lead dust. Improperly removing it can release a large amount of dust.

Paint Scraping. Scraping large painted areas, such as the side of a house or an entire room, even when done correctly, can create a large amount of dust.

Dust Containment at Doors



Fold protective sheeting at top and bottom before taping to leave slack.

Duct tape protective sheeting to perimeter of opening. Leave slack at the top and bottom. Staple corners for reinforcement.

Cut slit in protective sheeting to within 6" of top and bottom. Duct tape may be used for reinforcement.

Then tape another sheet of protective sheeting to top of door. Cut just short of floor. Staple top corners.

In addition to the steps outlined in the section on setting up the work area, high dust jobs require containment of doors that allow access but prevent the migration of dust.

Use this system to keep dust from spreading to another room.

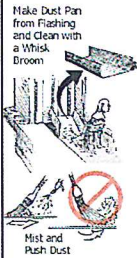
4. AT THE END OF THE JOB CLEANING UP

It is very important to use proper cleanup procedures at the end of every day and at the end of the job. Dust and paint chips left behind may contain lead and may endanger children.

On a daily basis, you should:

Pick Up Work Area

- Pick up as you go.
- Put trash in heavy-duty plastic bags.
- Vacuum the work area with a HEPA vacuum cleaner frequently.
- Clean tools at the end of the day.
- Wash up each time you take a break and before you go home.
- Dispose of or clean off your personal protective equipment.
- Remind residents to stay out of the work area.



When the job is complete:
Interior work:

- Pick up large chips with damp paper towel, **AND/OR**
- Mist then push dust into dust pan.
- Seal it in a heavy-duty bag.

Pick Up Protective Sheeting

- Clean off protective sheeting. Mist the sheeting before folding it dirty side inward, and either tape shut or seal in a heavy-duty bag. Dispose of protective sheeting as waste at the end of each job.

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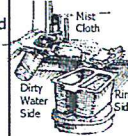
HEPA Vacuuming, Misting and Scrubbing

- Clean walls starting at the ceiling and working down to the floor by either vacuuming with a HEPA vacuum or wiping with a damp cloth.
- HEPA vacuum all remaining surfaces and objects in the work area, including furniture and fixtures.



Important: Vacuum carpet very slowly.

- Damp wipe all remaining surfaces and objects in the work area, except for carpeted or upholstered surfaces. Mop uncarpeted floors thoroughly using a mopping method that keeps the wash water separate from the rinse water or using a wet mopping system.



Exterior work:

- Collect all paint chips and debris, and seal it in a heavy-duty bag.
- Clean off protective sheeting. Fold dirty side inward (dirty side to dirty side) and dispose of protective sheeting as waste.

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Rinse Rag

- Squeeze rag into empty side of split bucket. Rinse out rag. Squeeze into empty side. Repeat as needed.
- Change rinse water often.
 - Use paper towels first if surfaces are very dirty.
 - Replace rag when it looks dirty.
- Clean until dust and debris are removed.



Cleaning Floors

Mist and Scrub

- At start of cleaning, soak mop in detergent water then mist small area with detergent before mopping.
- Scrub with mop.



OR

Squeeze Out and Wash

- Squeeze mop into empty bucket. Rinse in rinse water. Rinse often. Squeeze out and rinse again. Mop small areas at a time.



OR

Rinse and Dispose of Waste

- Repeat above process using clean water rather than detergent. When cleaning up a work site, use a new mop head for rinse stage.



Recommendation: Make a final pass with a HEPA vacuum.

- See *Ensuring the Property is Clean*, p. 74.

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DISPOSAL OF WASTE

After cleanup of the work area, take care to safely handle and remove dust and debris from the job. Supervisors should check with the EPA and their state's agency responsible for waste to find out about specific federal, state, and local regulations regarding disposal of waste that may contain lead-based paint.

Key Principle:

Confine Dust and Waste to the Work Area That Will Be Cleaned

Disposal Practices

Specific guidelines are:
Waste from Renovations

- Waste from renovation activities must be contained to prevent releases of dust and debris.
 - Collect and control all your waste including dust, debris, paint chips, protective sheeting, HEPA filters, dirty water, cloths, mop heads, wipes, protective clothing, respirators, gloves, architectural components, and other waste.
 - Use heavy plastic sheeting or bags to collect waste. Seal the bag securely with duct tape. Consider double bagging waste to prevent tears. Large components must be wrapped in protective sheeting and sealed with tape.
- Bag and seal all waste before removing it from the work area.
- At the end of each work day and at the conclusion of the renovation, waste that has been collected from renovation activities must be stored to prevent access to and the release of dust and debris.
- Waste transported from renovation activities must be contained to prevent release of dust and debris.

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Disposal Practices (Cont)

- Dispose of Waste Water Appropriately**
- Water used for cleanup should be filtered and dumped in a toilet if local rules allow. If not, collect it in a drum and take it with you. Never dump this water down a storm drain, or on the ground. Always dispose of waste water in accordance with federal, state and local regulations.
- Be Aware of Waste Disposal Rules**
- Because EPA considers most residential renovation and remodeling as "routine residential maintenance," most waste generated during these activities is classified as solid, non-hazardous waste, and should be taken to a licensed solid waste landfill. This is not the case for work done in commercial, public or other nonresidential child-occupied facilities, where waste may be considered hazardous and require special disposal methods. For further information, go to www.epa.gov/lead/regulatory-status-waste-generated-contractors-and-residents-lead-based-paint-activities.
 - Always check state and local requirements before disposing of waste. Some are more stringent than federal regulations.

CHECKING YOUR WORK!

Check Quality of Work & Cleanup

Check work quality **during the job** and at the **end of the job**.

- If there were any problems, were the causes of the problems corrected?**
- Were proper work practices used?**
- Was cleanup done thoroughly?**

How to Check

Checking your work involves two important steps.

1. Visual Checks

Follow the Ensuring the Property is Clean section (p. 74) when performing visual checks.

- During the Job.** Be sure that:
 - the cause of the problem is being corrected;
 - the work area is safely set up;
 - the practices in this guide are being used; and
 - dust and debris are not spreading beyond the work area.
- End of the Job.** Be sure that the repairs were done properly and that no dust or paint chips remain.

2. Perform Cleaning Verification

EPA's Renovation, Repair and Painting (RRP) rule requires contractors to follow a specific cleaning verification protocol. They use disposable cleaning cloths to wipe the floor and other surfaces of the work area and compare these cloths to an EPA-provided cleaning verification card to determine if the work area was adequately cleaned. See p. 74 for more information.

3. Take a Dust Wipe Sample

For work in homes receiving federal assistance or when otherwise requested/required, when interior work disturbs painted surfaces or produces dust, dust wipe samples must be taken and analyzed at the end of the job to check for harmful levels of lead-contaminated dust.

3. Take a Dust Wipe Sample (Cont)

- Dust wipe testing is recommended at the end of any job that disturbs paint or produces dust, especially when:
- Work that disturbs paint is done in homes built before 1978.
 - A young child or pregnant woman lives in the home.
 - Performing unit turnover or regular maintenance in rental properties.
- See p. 75 for more information

Why Is It Important to Check Work

- Checking that work was done properly is important because:
- Failing to correct conditions causing damage or deterioration results in repairs that do not last.
 - Work that fails to follow the recommendations in this guide may spread dust and paint chips beyond the work area and may endanger children in the home.
 - Dust and paint chips left behind due to poor cleaning may contain lead and may also endanger children in the home.
 - For contractors, checking your work improves the quality of a job and is likely to reduce the risk of a lawsuit in the event a child in the home is later found to have high levels of lead in his/her blood.

ONGOING MONITORING & MAINTENANCE

Regularly Check Repairs for Deterioration, Paint Chips, and Dust

Property owners should regularly monitor painted surfaces where maintenance or improvements were performed.

Check to see if:

- New evidence of deterioration or paint failure is present.
- The cause of the problem was corrected.
- Dust lead hazards are present.



Maintain Required Certification and Training

Important: This can only be done by dust wipe sampling.

- Contractors hired to do work disturbing lead paint are certified as a firm, and their workers must be trained. When a housing property owner's staff does the work, the property owner must be certified as a renovation firm, the employees supervising the work must be certified as renovators, and the employees doing the work must be trained by the supervisors in lead-safe renovation.

Maintain Surfaces and Thoroughly Clean

Then:

- Perform repairs, as needed, to maintain surfaces in a smooth and cleanable condition using the methods recommended in this guide; and
- Clean the area thoroughly using the practices described earlier in this section.

Methods of Monitoring

Follow the same methods used to check your work:

- Visual Check.** Look for deterioration, paint failure, dust and paint chips. Use the checklist inside the back cover of this guide.
- Test for Lead Dust.** Have dust wipe samples taken to check for dust that may be contaminated with lead. A test is needed to determine when dust contains harmful amounts of lead.

Methods of Monitoring (Cont)	To be accurate, these tests must be done according to specific procedures. See p. 75 for more information about these tests, and who should perform them.
When to Monitor?	It is important to monitor the results of the work to ensure that it is still effective. The monitoring times below are recommended (they are required for federally assisted housing): <ul style="list-style-type: none"> • During Unit Turnover, Routine Maintenance, or when Tenants Provide Information about a Problem with Painted Components. Perform a visual check for deteriorated paint, and the condition of past repairs and improvements involving painted surfaces. • Annually. Perform a visual check for deteriorated paint, and the condition of past repairs and improvements involving painted surfaces. • Every Two Years. Along with the annual visual check, get a dust wipe test done at least every two years. This type of test is strongly recommended when a young child or pregnant woman lives in the home.
Why Is It Important to Monitor & Maintain Work?	Monitoring and maintenance help: <ul style="list-style-type: none"> • Plan and implement maintenance tasks. • Protect occupants and neighbors, particularly children, from lead exposure. • Give owners, contractors, and residents a record of the condition of the unit.

Lead Worker Protection Rules (OSHA) cover [Lead in Construction, 29 CFR 1926.62](#) and [Lead in General Industry, 29 CFR 1910.1025](#). These regulations cover federal requirements for worker protection in the construction, remodeling, renovation, and maintenance industries. In addition, some states have worker protection rules covering lead exposure protection.

To find these regulations online, go to www.eCFR.gov and search or browse for the regulation you want.

5. RESOURCES

FEDERAL RULES ON LEAD-BASED PAINT SAFETY

There are federal and state rules governing different aspects of lead-based paint safety. Here is a brief overview of the federal laws regarding lead-based paint in housing. You should check applicable state and local rules and comply with the most stringent rules.

Lead Disclosure Rule (EPA and HUD): Before you rent or buy most pre-1978 homes or apartments, the seller or landlord must disclose available records, reports, and information on lead-based paint and lead-based paint hazards. The sales contract or lease must include a specific warning statement about lead-based paint, and if you are buying the home, you have up to 10 days to check for lead. The rule is located in two places, [title 24 of the Code of Federal Regulations \(CFR\) part 35, subpart A \(HUD\)](#) and [40 CFR 745, subpart F \(EPA\)](#).

The Lead Safe Housing Rule (HUD) applies to most federally assisted pre-1978 housing. Depending on the nature of the maintenance, rehabilitation or abatement work, and/or the amount of federal funds, certain lead-based paint safety actions must be taken. This HUD rule says when and how properties should be evaluated for lead-based paint and/or lead-based paint hazards. Lead-based paint on the inside and outside of the building needs to be stabilized or abated, and clearance – a check by a risk assessor and a lead laboratory on whether the work area is safe to occupy again – must be performed for all but the smallest amounts of work. Also, the rule outlines how owners or managers must handle cases where a child with an elevated blood lead level lives in an assisted property. [24 CFR 35, subparts B - R](#).

The Renovation, Repair and Painting (RRP) Rule (EPA) applies to firms performing RRP projects that disturb paint, in most pre-1978 housing or pre-1978 child care facilities and pre-schools. These firms must be certified by EPA (or an EPA authorized state), use certified renovators who are trained by an EPA (or state) accredited RRP training provider, use workers who are trained in lead-safe work practices by either an accredited RRP training provider or their supervisor, and follow lead-safe work practices, including procedures outlined in this guide, and additional procedures in [40 CFR 745, subpart E](#).

GLOSSARY

Child-occupied facility - a pre-1978 building, or part of one, visited regularly by a child under age 6, such as a child-care center or pre-school.

Enclosure - a rigid, durable construction material that is mechanically fastened to the structure to cover painted surfaces.

HEPA filter - High-Efficiency Particulate Air filter. A filter that can remove particles of 0.3 micrometers or larger from the air at 99.97 percent or greater efficiency.

HEPA vacuum - a vacuum with a HEPA filter.

HUD Guidelines - HUD's Guidelines for the Evaluation and Control of Lead-Based Paint Hazards in Housing.

Interim controls - a set of measures to temporarily reduce exposure to lead hazards. Interim control measures include special cleaning, repairs, paint stabilization, enclosure, and containment. For a full discussion, see the HUD Guidelines.

N100, R100, or P100 - a filter class that describes a respirator's ability to filter airborne particles. A respirator filter rated as N100, R100, or P100 removes particles of 0.3 microns or larger from the air at 99.97 percent or greater efficiency. An N filter does not filter oil; an R filter is resistant to oil; a P filter is oil proof.

NIOSH - National Institute for Occupational Safety and Health, an agency within the Centers for Disease Control and Prevention that tests and certifies safety equipment including respirators.

OSHA - Occupational Safety and Health Administration, an agency of the U.S. Department of Labor that oversees worker safety and health.

Paint stabilization - a process of wet scraping, priming, and finish coating of a deteriorated painted surface to prevent further deterioration.

Protective sheeting - made of plastic, poly or other material. Protective sheeting must be puncture and tear resistant, impermeable to liquids, and durable (cloth or canvas sheets are not acceptable as protective sheeting).

RRP – EPA’s Renovation, Repair and Painting (RRP) Rule establishes requirements for firms and individuals performing renovations, and affects contractors, property managers, and others who disturb painted surfaces. It applies to work in houses, apartments, and child-occupied facilities (such as schools and day-care centers) built before 1978. It includes pre-renovation education requirements as well as training, firm certification, and work practice requirements.

Shroud - a protective covering that contains dust and chips.

Tack pad - a sticky pad that helps remove dust from the soles of shoes.

Window trough - the area of the sill between a window stool or interior sill and the frame of the storm window where the bottom sash rests when closed (also called a window well or exterior sill).

- [Sample Pre-Renovation Form Confirmation of Receipt of Lead Pamphlet](#). This sample form may be used by firms to document compliance with the requirements of the federal lead-based paint renovation, repair, and painting rule.
- [Sample Renovation Recordkeeping Checklist](#). Sample checklist for regulated RRP activities.

FOR MORE INFORMATION

This section lists federal agencies’ useful publications and contacts.

These documents can be found on the web by doing a search of the title. They are all housed on HUD’s, EPA’s, or OSHA’s websites.

Publications

- [Guidelines for the Evaluation and Control of Lead-Based Paint Hazards in Housing](#) (2012). Technical guidance on methods for identifying and controlling lead-based paint and lead-based paint hazards. The Guidelines can also be downloaded for free from the HUD Office of Lead Hazard Control and Healthy Homes web site.
- [Lead in Construction](#) (2004). Guidebook that describes worker protection measures needed to meet OSHA requirements for lead including respiratory protection and protective clothing.
- [The Lead-Safe Certified Guide to Renovate Right](#) (September 2011). Pamphlet for pre-1978 contractors, homeowners, tenants, and child care facilities with basic facts about lead renovation information.
- [Protect Your Family from Lead in Your Home](#) (June 2017). Pamphlet that provides basic information about addressing and preventing lead-based paint hazards in the home.
- [Steps to Lead Safe Renovation, Repair and Painting](#) (October 2011). Guide for contractors/homeowners on how to plan for and complete a home renovation, repair or painting project in pre-1978 housing and child-occupied facilities using lead-safe work practices.
- [Small Entity Compliance Guide to Renovate Right: EPA’s Lead-Based Paint Renovation, Repair, and Painting Program](#) (September 2011). A handbook for contractors, property managers and maintenance personnel working in homes and child-occupied facilities built before 1978.

CONTACTS

The phone numbers below can be reached by people with hearing or speech difficulties through the FedRelay Service through teletype (TTY) at 800-877-8339.

U.S. Department of Labor
Occupational Safety and Health Administration (OSHA)
Publications Office
200 Constitution Avenue, NW, Room N3626
Washington, DC 20210
Lead: www.osha.gov/SLTC/lead
Respirators: www.osha.gov/SLTC/respiratoryprotection

U.S. Environmental Protection Agency (EPA)
Office of Pollution Prevention and Toxics (OPPT)
1200 Pennsylvania Ave, N.W.
Washington, DC 20460
www.epa.gov/lead
National Lead Information Center (NLIC)
1-800-424-Lead (1-800-424-5323)
www.epa.gov/lead/forms/lead-hotline-national-lead-information-center

U.S. Dept. of Health and Human Services (HHS)
Centers for Disease Control and Prevention (CDC)
Agency for Toxic Substances and Disease Registry (ATSDR)
4770 Buford Hwy NE
Atlanta, GA 30341
800-232-4636
www.atsdr.cdc.gov/substances/toxsubstance.asp?toxid=22

Centers for Disease Control and Prevention (CDC)
National Center for Environmental Health (NCEH)
4770 Buford Hwy NE
Atlanta, GA 30341
800-232-4636
www.cdc.gov/nceh/lead

Centers for Disease Control and Prevention (CDC)
 National Institute of Occupational Safety and Health (NIOSH)
 Hubert H. Humphrey Building, Room 7154
 200 Independence Avenue, SW
 Washington, DC 20201
 800-232-4636
www.cdc.gov/niosh/topics/lead

National Institutes of Health (NIH)
 National Institute of Environmental Health Sciences (NIEHS)
 105 T. W. Alexander Drive
 Research Triangle Park, NC 27709
www.niehs.nih.gov/health/topics/agents/lead

U.S. Dept. of Housing and Urban Development (HUD)
 Office of Lead Hazard Control and Healthy Homes
 451 7th Street, SW Room 8236
 Washington, DC 20410
 202-402-7698
www.hud.gov/healthyhomes

GETTING THE WORD OUT

How Owners and Occupants Can Work Together to Improve Lead Safety in Homes

Gaining tenant cooperation can help rental property owners and managers respond promptly to conditions that could pose a health threat to occupants.

Owner Responsibilities

1. Maintain renovation firm certification, or use only certified renovation firms for maintenance work as required. When renovation, repair or painting work will be done, notify tenants and provide them (or have the contractor notify and provide them) with the Lead-Safe Certified Guide to Renovate Right: Important Lead Hazard Information for Families, Child Care Providers and Schools, also known as the "Renovate Right" pamphlet.
2. Maintain the building.
 - Ensure maintenance supervisors are trained and RRP-certified, and that workers are trained as required to minimize dust, clean up effectively, and protect themselves.
 - Conduct regular building checks for potential problems, such as:
 - Flaking or peeling paint
 - Water damage to paint, plaster, or wood
 - Plumbing or roof leaks
 - Painted doors and windows that do not operate smoothly
 - Building shell issues including leaks
 - Interior moisture causing damage
 - Dirty and un-cleanable surfaces
3. Educate occupants and gain their cooperation.
 - Fulfill federal notice and disclosure requirements.
 - Have occupants inform you of damaged paint and other maintenance problems.
 - Explain to occupants why steps, such as regular cleaning, prevent lead-based paint hazards (see below).
 - Consider providing cleaning supplies and tools (see p. 78) to occupants to encourage cleaning.

- Remind occupants that it is a good practice to provide notice of problems in writing.
- Make sure occupants understand the property's maintenance reporting procedures and indicate that these problems require priority attention.

Precautions Tenants Can Take to Protect Their Family

Occupants should pay special attention to the pamphlet "Protect Your Family from Lead in Your Home" (p. 64). It describes steps that occupants can take to reduce the chance that they will be exposed to lead hazards. Suggestions from this pamphlet include:

- Clean floors, window frames, interior window sills, and other flat surfaces each week using warm water and an all-purpose cleaner.
- Clean up any paint chips immediately.
- Keep child play areas clean.
- Wash children's hands often.
- Keep children from chewing interior window sills and other painted surfaces.

Federal Lead Disclosure Requirements for most pre-1978 Homes (24 CFR Part 35, Subpart A, or 40 CFR Part 745, Subpart F)

- Landlords and home sellers must notify future occupants about lead-based paint hazards by giving them the pamphlet *Protect Your Family from Lead in Your Home*.
- Landlords and home sellers must disclose information about known lead-based paint and/or lead-based paint hazards before dwelling leases or home sales contracts take effect. Leases and sales contracts must also include a form about lead-based paint that meets federal requirements. Contact HUD or EPA for more information about these requirements (see p. 66).

Pre-Renovation Education Requirements

The pre-renovation education requirements of the Renovation, Repair and Painting Rule ensure that owners and occupants of most pre-1978 homes and child-occupied facilities are provided information about potential hazards of lead-based paint exposure before renovations are begun.

What are the requirements? The rule requires distributing the pamphlet, "The Lead-Safe Certified Guide to Renovate Right: Important Lead Hazard Information for Families, Child Care Providers and Schools," also known as the "Renovate Right" pamphlet, to tenants or child-care center children's families, before the work starts.

- In housing built before 1978, the contractor must distribute EPA's lead pamphlet to the owner and occupants before renovation starts.
- For work in common areas of multi-family housing, the contractor must either distribute renovation notices to tenants or post informational signs about the renovation or repair job.
- In a child-occupied facility the contractor must distribute the lead pamphlet to the owner of the building and an adult representative of the child-occupied facility before the renovation starts. Also, the contractor must either distribute renovation notices to parents/guardians of the children attending the child-occupied facility, or post informational signs about the renovation or repair job.
- The contractor must obtain confirmation that the owner and the housing occupants received the lead pamphlet or obtain certificate(s) of mailing from the post office. The contractor may also certify in writing that the lead pamphlet was delivered but written confirmation was not received.
- Retain records for at least three years.

How do I get the "Renovate Right" pamphlet? You can download the pamphlet from EPA's website at www.epa.gov/lead. Single copies of the pamphlet are available from the National Lead Information Center at 1-800-424-LEAD (5323). For multiple copies contact the Government Publishing Office (GPO) at <http://bookstore.gpo.gov/> or (202) 512-1800.

The phone numbers above can be reached by people with hearing or speech difficulties through the FedRelay Service through teletype (TTY) at 800-877-8339.

Note: In federally assisted pre-1978 housing, HUD requires notification to be distributed to occupants within 15 days after lead-based paint or lead-based paint hazards are identified in their unit (or common areas, if applicable), and within 15 days after completion of hazard control work in their unit or common areas.

Why Lead Safety Makes Sense for Property Owners and Contractors

Property owners and contractors that use safe work practices benefit in several ways.

Advantages for Owners of Residential Rental Properties

Owners who maintain their rental properties using work practices that increase lead safety can use this information to attract tenants who are concerned for their child's health. Some local agencies may even maintain a listing of housing units that meet certain lead-safety standards. When giving prospective tenants the lead-based paint pamphlet and the required disclosure information, they can tell the tenant that the property has a program to minimize the risk of hazards from lead-based paint. A safety program would include:

- Educating and training maintenance workers.
- Examining property at turnover and then every year for deteriorating paint.
- Correcting conditions that may cause paint to flake and peel (excessive moisture, binding doors, etc.).
- Doing work safely and cleaning up well.
- Making sure surfaces are cleanable and doing a professional cleaning at turnover.
- Performing dust wipe tests before occupancy, and after every maintenance job that disturbs old paint. It is also recommended to perform a dust wipe sample test at least every two years. Keep the results on file.
- Encouraging tenants to inform property owners if there is a problem.

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Advantages for Contractors

Doing work safely can enhance a contractor's reputation, maintain the safety of workers, and protect the health of customers and their children.

A program for lead safety can also help contractors when bidding new jobs. For example, contractors performing repairs and improvements in homes built before 1978 must give potential customers a pamphlet about the risk of lead-based paint during renovation. Contractors that follow practices for lead safety can demonstrate to customers that they understand the risks and show that their workers take specific precautions to protect against lead-based paint hazards. Lead safety can help "give you a leg up" on the competition.

Safe work practices also offer benefits that are important to customers:

- Dust and debris are confined to the work area.
- A "clean" work area at the end of the job.
- Some work offers additional benefits (for example, repairs to windows can improve their operation, prevent damage from moisture, and lower energy and maintenance costs).
- Lead safety also helps protect you as a contractor. For example, having an independent, certified professional take dust wipe samples of the work area promptly after cleanup provides strong documentation that no lead hazards were present in the work area at the end of the job.

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MORE ABOUT TECHNICAL TOPICS

Respiratory Protection

Respiratory protection helps prevent workers from breathing harmful amounts of lead and other substances, touching their mouths with dusty hands, or swallowing paint chips or dust.

When work creates high levels of dust in the air, properly trained, protected, and certified lead-based paint professionals should conduct the work. See OSHA's Lead in Construction Standard, 29 CFR 1926.62.

See p. 61, for information about OSHA regulations, and see the bottom of www.osha.gov/SLTC/lead/exposurecontrols.html for information on controlling workers' exposure to lead.

Other Protection

In addition to respiratory protection for activities that generate high levels of dust, compliance with OSHA's Lead in Construction Standard may involve blood tests for workers, medical monitoring, hand washing facilities, other personal protective equipment, shower and changing areas, and additional training.

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ENSURING THE PROPERTY IS CLEAN

To ensure work areas are safe for re-occupancy, confirm that the property has been properly cleaned and no lead hazards remain. Cleaning verification is required by the Renovation, Repair and Painting Rule. If the housing receives federal assistance, clearance testing is required. When the cleaning verification procedure is required, an EPA Certified Renovator must perform the cleaning verification. If clearance is required, a Certified Lead Inspector, Certified Lead Risk Assessor, or Certified Lead Sampling Technician must conduct clearance testing.

Cleaning Verification

Cleaning Verification Procedure:

After completion of cleaning, the Certified Renovator must visually inspect the work area to confirm that it is free of dust, debris, or residue.

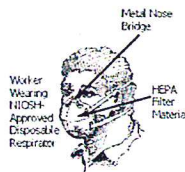
For exterior projects, when work areas have passed the visual inspection, the project is complete, and the area may be turned over to the occupants.

For interior projects:

- When work areas have passed the visual inspection, the cleaning verification procedure is performed by a renovator certified by EPA or an EPA authorized state.
- Cleaning verification involves wiping all dust collection surfaces in the work area with a wet, disposable cleaning cloth and comparing that cloth visually to a cleaning verification card. If the cloth is not cleaner than the card the area must be re-cleaned, and the cleaning verification step must be repeated. If the cloth is still not as clean as the card the renovator must wait one hour and wipe the area with a dry electrostatic cloth. When all surfaces have passed comparison with the card or completed the verification procedure the area can be turned back over to residents.

Cleaning verification cards are available by calling the National Lead Information Center at 1-800-424-LEAD (5323). The phone number can be reached by people with hearing or speech difficulties through phone or teletype (TTY) at 711.

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Note: For surface areas greater than 40 square feet, the area must be divided into roughly equal sections that are 40 square feet or less. Wipe each section separately using a new wet disposable cleaning cloth for each separate section.

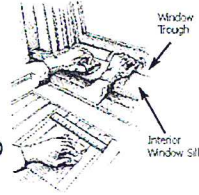
Clearance Testing

By having dust wipe samples taken and tested by an [EPA-recognized lead laboratory](#), job supervisors, certified renovators and property owners can locate dust lead hazards and test the effectiveness of cleaning at the end of a job. If federal funds are involved, clearance is required.

Where Are Dust Samples Taken?

Samples are taken in the area of the dwelling where work has been completed. The following surfaces within the work area should be sampled:

- Floor
- Interior window sills (also referred to as window stools)
- Window troughs (where the bottom of the window sash meets the frame)



When Should Dust Samples Be Taken?

- At the end of a job, after the project has passed visual inspection of the work area to confirm that it is free of dust, debris, or residue
- If there is a child or pregnant woman living in the home
- Before a family moves into a home
- Following work in homes receiving federal assistance

What Do the Results Mean?

The results of the laboratory analysis will show the amount of lead found in the dust from the area sampled. The results are measured in micrograms per square foot ($\mu\text{g}/\text{ft}^2$).

To determine if the project has passed clearance regarding dust lead levels, based on EPA's requirements, determine if the results are below the following standards (in effect as of 2018):

- 40 $\mu\text{g}/\text{ft}^2$ on floors
- 250 $\mu\text{g}/\text{ft}^2$ on interior window sills
- 400 $\mu\text{g}/\text{ft}^2$ on window troughs

For work done under HUD's lead hazard control grants, determine if the results are below the following action levels (also as of 2018):

- 10 $\mu\text{g}/\text{ft}^2$ on interior floors
- 40 $\mu\text{g}/\text{ft}^2$ on porch floors
- 100 $\mu\text{g}/\text{ft}^2$ on interior window sills
- 100 $\mu\text{g}/\text{ft}^2$ on window troughs

Who Can Take Dust Wipe Samples?

Following painting, home maintenance, and renovation work:

- Where dust wipe sampling is elected or required by regulations, sampling must be done by appropriately trained personnel. This clearance testing may be done by a lead-based paint inspector, risk assessor, or sampling technician certified by a State or the EPA. Check your state's requirements. Note: In federally assisted housing, the individual performing sampling cannot have been involved in the work.

What Actions Do I Take Based on the Results?

If the results show dust lead levels equal to or higher than the standards or action levels listed above, the area where the work was performed should be re-cleaned until dust clearance sample results are below the applicable clearance or action standard.

If the dust wipe samples were taken as part of ongoing monitoring by maintenance staff or the property owner, the surfaces where work was performed should be examined to see if the work has failed or new conditions that generate dust have developed. In either case, these conditions should be corrected using lead-safety principles and work practices.

If the work required to correct the likely source of the dust lead hazard is beyond the scope of this guide, the property owner should seek the help of a lead-based paint professional trained to safely correct lead-based paint hazards.

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WORKSITE CHECKLISTS

Before Work Begins

- Has the paint that will be disturbed been tested to determine if it is lead-based paint, or is it assumed to be lead-based paint?
- Have the owner(s) and/or occupant(s) been notified as required by federal law? (see p. 69)
- Are the causes of the problems located?
- Is the firm conducting the work and the project supervisor certified for RRP work by EPA or an EPA-authorized state, and have the workers been trained in lead-safe work practices?
- Have the supplies needed for the project been brought to the worksite? (See supplies checklist below)
- Is the work area set up?
- Is the work area closed off from occupant(s), with lead warning sign(s)?

During Work

- Are dust and debris contained so that no dust or debris leaves the work area?
- Are workers wearing necessary protective clothing and equipment?
- Are all workers, tools and other items free of dust and debris when leaving the work area?
- Is all waste contained and stored to prevent access and the release of dust and debris?

At the End of the Job

- Did workers fix the cause of the problem?
- Did workers remove visible dust and debris?
- Did workers properly dispose of dust and debris?
- Did workers clean the work area until no dust, debris or residue remained?
- Was cleaning verification or dust sampling performed by qualified individuals to make sure that cleanup worked?

For Long-Term Maintenance

- Is there a plan to:
- Maintain painted surfaces?
 - Keep surfaces clean and cleanable?
 - Prevent water and moisture damage?

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Supplies Checklist (Note that not all items are needed for all jobs)

- Set Up
- Signs
 - Barrier tape, rope, or fencing
 - Cones
 - Heavy-duty plastic sheeting
 - Tape (masking, duct, or painter's)
 - Stapler
 - Utility knife or scissors
 - Rigid framing material for vertical containment

Protect Yourself

- Painter's hat
- Disposable coveralls
- Disposable N, P, or R-100 rated respirator
- Disposable shoe covers
- Safety glasses
- Ear protection if using power tools

Safety station with:

- Paper towels and hand soap
- 2-bottle eye-wash station
- First aid kit
- Clipboard with emergency numbers
- Drinking water and cups

Minimize the Dust

- Wet-dry sandpaper, sanding sponge
- Misting bottle or pump sprayer
- Paint scrapers
- Plane: jack, smooth or jointer
- HEPA filter equipped vacuum ("HEPA vacuum;" "HEPA vac")
- Heavy-duty plastic bags
- Tack pads (large, sticky pads that help remove dust)
- Paper towels, or disposable wipes

Other tools that may be needed:

- Low-temperature heat gun (under 1,100 degrees Fahrenheit)
- Chemical strippers without methylene chloride
- Power tools with HEPA filter equipped vacuum attachments

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Clean Up

- Disposable wet-cleaning wipes or hand towels
- General-purpose cleaner
- Mop and disposable mop heads
- Two buckets or one two-sided bucket with a wringer
- Shovel and rake
- Electrostatically-charged dry cleaning cloths
- HEPA filter equipped vacuum

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Disclaimer: The guidance offered in this document is based upon the latest lead hazard control knowledge and technology available at the time it was written. Users bear all risks associated with reliance on these work practices and have sole responsibility for evaluating the information it contains. Users bear sole responsibility to form their own independent judgments on the document's use, modification, and adaptation as appropriate. Neither the United States Government nor any of its employees makes any warranty, expressed or implied, or assumes any legal liability for any use of, or the results of, any information, product, or process discussed in this document.

Why Follow this Guide?

The Simple Work Practices discussed in this Field Guide can protect children and workers

- This Field Guide contains practical steps for lead safety.
- With small changes from traditional work practices, workers can protect themselves, their families, and their customers, especially children, from lead exposure.

Painting, Home Improvement, and Maintenance Work in Older Homes Can Endanger Children

- Most homes built before 1978 contain lead-based paint
- Doing work improperly can create a lot of paint chips and dust that may contain lead
- Lead in paint chips, dust, and soil gets on children's hands and toys which they may put in their mouths
- Lead can make children very sick and cause permanent brain and nerve damage, learning difficulties, and behavior problems

Poor Maintenance Also Endangers Children

- Paint flaking and peeling is often caused by moisture
- Rubbing or impact on doors, windows, and trim can cause paint failure and produce lead-containing dust

Who Should Use This Guide?

- Maintenance Contractors
- Building maintenance staff
- Property managers and owners
- Homeowners hiring contractors or doing work on their own residences
- Local public housing agency staff
- Local public health agency staff
- Volunteers
- Contractors working in federally assisted housing

Ordering Additional Copies

Single printed copies of Lead Paint Safety: A Field Guide for Interim Controls in Painting and Home Maintenance can be ordered from the National Lead Information Center at 1-800-424-5323 (TTY: 800-877-8339) while supplies last, or you can download the Field Guide from the HUD Office of Lead Hazard Control and Healthy Homes' web site at www.hud.gov/healthyhomes.



February 2019

THE LEAD-SAFE CERTIFIED GUIDE TO RENOVATE RIGHT

WARNING
LEAD WORK AREA
POISON
NO SMOKING
OR EATING

CAUTION CAUTION CAUTION CAUTION CAUTION CAUTION

1-800-424-LEAD (5323)
epa.gov/getleadsafe
EPA-740-K-10-001
Revised September 2011

Important lead hazard information for families, child care providers and schools.

This document may be purchased through the U.S. Government Printing Office online at bookstore.gpo.gov or by phone (toll-free): 1-866-512-1800.

IT'S THE LAW!

Federal law requires contractors that disturb painted surfaces in homes, child care facilities and schools built before 1978 to be certified and follow specific work practices to prevent lead contamination. Always ask to see your contractor's certification.

Federal law requires that individuals receive certain information before renovating more than six square feet of painted surfaces in a room for interior projects or more than twenty square feet of painted surfaces for exterior projects or window replacement or demolition in housing, child care facilities and schools built before 1978.

- Homeowners and tenants: renovators must give you this pamphlet before starting work.
- Child care facilities, including preschools and kindergarten classrooms, and the families of children under six years of age that attend those facilities: renovators must provide a copy of this pamphlet to child care facilities and general renovation information to families whose children attend those facilities.

WHO SHOULD READ THIS PAMPHLET?

This pamphlet is for you if you:

- Reside in a home built before 1978.
- Own or operate a child care facility, including preschools and kindergarten classrooms, built before 1978, or
- Have a child under six years of age who attends a child care facility built before 1978.

You will learn:

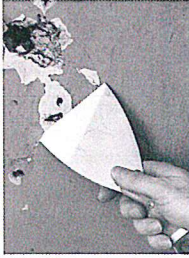
- Basic facts about lead and your health.
- How to choose a contractor, if you are a property owner.
- What tenants, and parents/guardians of a child in a child care facility or school should consider.
- How to prepare for the renovation or repair job.
- What to look for during the job and after the job is done.
- Where to get more information about lead.

This pamphlet is not for:

- **Abatement projects.** Abatement is a set of activities aimed specifically at eliminating lead or lead hazards. EPA has regulations for certification and training of abatement professionals. If your goal is to eliminate lead or lead hazards, contact the National Lead Information Center at 1-800-424-LEAD (5323) for more information.
- **"Do-it-yourself" projects.** If you plan to do renovation work yourself, this document is a good start, but you will need more information to complete the work safely. Call the National Lead Information Center at 1-800-424-LEAD (5323) and ask for more information on how to work safely in a home with lead-based paint.
- **Contractor education.** Contractors who want information about working safely with lead should contact the National Lead Information Center at 1-800-424-LEAD (5323) for information about courses and resources on lead-safe work practices.



RENOVATING, REPAIRING, OR PAINTING?



- Is your home, your building, or the child care facility or school your children attend being renovated, repaired, or painted?
- Was your home, your building, or the child care facility or school where your children under six years of age attend built before 1978?

If the answer to these questions is YES, there are a few important things you need to know about lead-based paint.

This pamphlet provides basic facts about lead and information about lead safety when work is being done in your home, your building or the child care facility or school your children attend.

The Facts About Lead

- Lead can affect children's brains and developing nervous systems, causing reduced IQ, learning disabilities, and behavioral problems. Lead is also harmful to adults.
- Lead in dust is the most common way people are exposed to lead. People can also get lead in their bodies from lead in soil or paint chips. Lead dust is often invisible.
- Lead-based paint was used in more than 38 million homes until it was banned for residential use in 1978.
- Projects that disturb painted surfaces can create dust and endanger you and your family. Don't let this happen to you. Follow the practices described in this pamphlet to protect you and your family.

2

LEAD AND YOUR HEALTH

Lead is especially dangerous to children under six years of age.

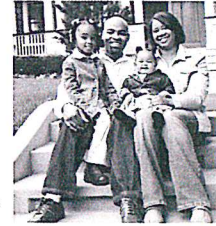
Lead can affect children's brains and developing nervous systems, causing:

- Reduced IQ and learning disabilities.
- Behavior problems.

Even children who appear healthy can have dangerous levels of lead in their bodies.

Lead is also harmful to adults. In adults, low levels of lead can pose many dangers, including:

- High blood pressure and hypertension.
- Pregnant women exposed to lead can transfer lead to their fetuses. Lead gets into the body when it is swallowed or inhaled.
- People, especially children, can swallow lead dust as they eat, play, and do other normal hand-to-mouth activities.
- People may also breathe in lead dust or fumes if they disturb lead-based paint. People who sand, scrape, burn, brush, blast or otherwise disturb lead-based paint risk unsafe exposure to lead.



What should I do if I am concerned about my family's exposure to lead?

- A blood test is the only way to find out if you or a family member already has lead poisoning. Call your doctor or local health department to arrange for a blood test.
- Call your local health department for advice on reducing and eliminating exposures to lead inside and outside your home, child care facility or school.
- Always use lead-safe work practices when renovation or repair will disturb painted surfaces.

For more information about the health effects of exposure to lead, visit the EPA lead website at epa.gov/lead/pubs/leadinfo or call 1-800-424-LEAD (5323).

There are other things you can do to protect your family every day.

- Regularly clean floors, window sills, and other surfaces.
- Wash children's hands, bottles, pacifiers, and toys often.
- Make sure children eat a healthy, nutritious diet consistent with the USDA's dietary guidelines, that helps protect children from the effects of lead.
- Wipe off shoes before entering the house.

3

WHERE DOES THE LEAD COME FROM?

Dust is the main problem.

The most common way to get lead in the body is from dust. Lead dust comes from deteriorating lead-based paint and lead-contaminated soil that gets tracked into your home. This dust may accumulate to unsafe levels. Then, normal hand-to-mouth activities, like playing and eating (especially in young children), move that dust from surfaces like floors and window sills into the body.

Home renovation creates dust.

Common renovation activities like sanding, cutting, and demolition can create hazardous lead dust and chips.

Proper work practices protect you from the dust.

The key to protecting yourself and your family during a renovation, repair or painting job is to use lead-safe work practices such as containing dust inside the work area, using dust-minimizing work methods, and conducting a careful cleanup, as described in this pamphlet.

Other sources of lead.

Remember, lead can also come from outside soil, your water, or household items (such as lead-glazed pottery and lead crystal). Contact the National Lead Information Center at 1-800-424-LEAD (5323) for more information on these sources.



4

CHECKING YOUR HOME FOR LEAD-BASED PAINT



Older homes, child care facilities, and schools are more likely to contain lead-based paint.

Homes may be single-family homes or apartments. They may be private, government-assisted, or public housing. Schools are preschools and kindergarten classrooms. They may be urban, suburban, or rural.

You have the following options:

You may decide to assume your home, child care facility, or school contains lead. Especially in older homes and buildings, you may simply want to assume lead-based paint is present and follow the lead-safe work practices described in this brochure during the renovation, repair, or painting job.

You can hire a certified professional to check for lead-based paint.

These professionals are certified risk assessors or inspectors, and can determine if your home has lead or lead hazards.

• A certified inspector or risk assessor can conduct an inspection telling you whether your home, or a portion of your home, has lead-based paint and where it is located. This will tell you the areas in your home where lead-safe work practices are needed.

• A certified risk assessor can conduct a risk assessment telling you if your home currently has any lead hazards from lead in paint, dust, or soil. The risk assessor can also tell you what actions to take to address any hazards.

• For help finding a certified risk assessor or inspector, call the National Lead Information Center at 1-800-424-LEAD (5323).

You may also have a certified renovator test the surfaces or components being disturbed for lead by using a lead test kit or by taking paint chip samples and sending them to an EPA-recognized testing laboratory. Test kits must be EPA-recognized and are available at hardware stores. They include detailed instructions for their use.

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FOR PROPERTY OWNERS

You have the ultimate responsibility for the safety of your family, tenants, or children in your care.

This means properly preparing for the renovation and keeping persons out of the work area (see p. 8). It also means ensuring the contractor uses lead-safe work practices.

Federal law requires that contractors performing renovation, repair and painting projects that disturb painted surfaces in homes, child care facilities, and schools built before 1978 be certified and follow specific work practices to prevent lead contamination.

Make sure your contractor is certified, and can explain clearly the details of the job and how the contractor will minimize lead hazards during the work.

- You can verify that a contractor is certified by checking EPA's website at epa.gov/getleadsafe or by calling the National Lead Information Center at 1-800-424-LEAD (5323). You can also ask to see a copy of the contractor's firm certification.
- Ask if the contractor is trained to perform lead-safe work practices and to see a copy of their training certificate.
- Ask them what lead-safe methods they will use to set up and perform the job in your home, child care facility or school.
- Ask for references from at least three recent jobs involving homes built before 1978, and speak to each personally.

Always make sure the contractor is clear about how the work will be set up, performed, and cleaned.

- Share the results of any previous lead tests with the contractor.
- You should specify in the contract that they follow the work practices described on pages 9 and 10 of this brochure.
- The contract should specify which parts of your home are part of the work area and specify which lead-safe work practices will be used in those areas. Remember, your contractor should confine dust and debris to the work area and should minimize spreading that dust to other areas of the home.
- The contract should also specify that the contractor will clean the work area, verify that it was cleaned adequately, and re-clean it if necessary.

If you think a worker is not doing what he is supposed to do or is doing something that is unsafe, you should:

- Direct the contractor to comply with regulatory and contract requirements.
- Call your local health or building department, or
- Call EPA's hotline 1-800-424-LEAD (5323).

If your property receives housing assistance from HUD (or a state or local agency that uses HUD funds), you must follow the requirements of HUD's Lead-Safe Housing Rule and the ones described in this pamphlet.

6

PREPARING FOR A RENOVATION

The work areas should not be accessible to occupants while the work occurs.

The rooms or areas where work is being done may need to be blocked off or sealed with plastic sheeting to contain any dust that is generated. Therefore, the contained area may not be available to you until the work in that room or area is complete, cleaned thoroughly, and the containment has been removed. Because you may not have access to some areas during the renovation, you should plan accordingly.

You may need:

- Alternative bedroom, bathroom, and kitchen arrangements if work is occurring in those areas of your home.
- A safe place for pets because they too can be poisoned by lead and can track lead dust into other areas of the home.
- A separate pathway for the contractor from the work area to the outside in order to bring materials in and out of the home. Ideally, it should not be through the same entrance that your family uses.
- A place to store your furniture. All furniture and belongings may have to be moved from the work area while the work is being done. Items that can't be moved, such as cabinets, should be wrapped in plastic.
- To turn off forced-air heating and air conditioning systems while the work is being done. This prevents dust from spreading through vents from the work area to the rest of your home. Consider how this may affect your living arrangements.

You may even want to move out of your home temporarily while all or part of the work is being done.

Child care facilities and schools may want to consider alternative accommodations for children and access to necessary facilities.



8

FOR TENANTS AND FAMILIES OF CHILDREN UNDER SIX YEARS OF AGE IN CHILD CARE FACILITIES AND SCHOOLS

You play an important role ensuring the ultimate safety of your family.

This means properly preparing for the renovation and staying out of the work area (see p. 8).

Federal law requires that contractors performing renovation, repair and painting projects that disturb painted surfaces in homes built before 1978 and in child care facilities and schools built before 1978, that a child under six years of age visits regularly, to be certified and follow specific work practices to prevent lead contamination.

The law requires anyone hired to renovate, repair, or do painting preparation work on a property built before 1978 to follow the steps described on pages 9 and 10 unless the area where the work will be done contains no lead-based paint.

If you think a worker is not doing what he is supposed to do or is doing something that is unsafe, you should:

- Contact your landlord.
- Call your local health or building department, or
- Call EPA's hotline 1-800-424-LEAD (5323).

If you are concerned about lead hazards left behind after the job is over, you can check the work yourself (see page 10).



7

DURING THE WORK

Federal law requires contractors that are hired to perform renovation, repair and painting projects in homes, child care facilities, and schools built before 1978 that disturb painted surfaces to be certified and follow specific work practices to prevent lead contamination.

The work practices the contractor must follow include these three simple procedures, described below:

1. Contain the work area. The area must be contained so that dust and debris do not escape from that area. Warning signs must be put up and plastic or other impermeable material and tape must be used as appropriate to:

- Cover the floors and any furniture that cannot be moved.
- Seal off doors and heating and cooling system vents.
- For exterior renovations, cover the ground and, in some instances, erect vertical containment or equivalent extra precautions in containing the work area.

These work practices will help prevent dust or debris from getting outside the work area.

2. Avoid renovation methods that generate large amounts of lead-contaminated dust. Some methods generate so much lead-contaminated dust that their use is prohibited. They are:

- Open flame burning or torching.
- Sanding, grinding, planing, needle gunning, or blasting with power tools and equipment not equipped with a shroud and HEPA vacuum attachment.
- Using a heat gun at temperatures greater than 1100°F.



There is no way to eliminate dust, but some renovation methods make less dust than others. Contractors may choose to use various methods to minimize dust generation, including using water to mist areas before sanding or scraping; scoring paint before separating components; and prying and pulling apart components instead of breaking them.

3. Clean up thoroughly. The work area should be cleaned up daily to keep it as clean as possible. When all the work is done, the area must be cleaned up using special cleaning methods before taking down any plastic that isolates the work area from the rest of the home. The special cleaning methods should include:

- Using a HEPA vacuum to clean up dust and debris on all surfaces, followed by
- Wet wiping and wet mopping with plenty of rinse water.

When the final cleaning is done, look around. There should be no dust, paint chips, or debris in the work area. If you see any dust, paint chips, or debris, the area must be re-cleaned.

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FOR PROPERTY OWNERS: AFTER THE WORK IS DONE

When all the work is finished, you will want to know if your home, child care facility, or school where children under six attend has been cleaned up properly.

EPA Requires Cleaning Verification.

In addition to using allowable work practices and working in a lead-safe manner, EPA's RRP rule requires contractors to follow a specific cleaning protocol. The protocol requires the contractor to use disposable cleaning cloths to wipe the floor and other surfaces of the work area and compare these cloths to an EPA-provided cleaning verification card to determine if the work area was adequately cleaned. EPA research has shown that following the use of lead-safe work practices with the cleaning verification protocol will effectively reduce lead-dust hazards.

Lead-Dust Testing.

EPA believes that if you use a certified and trained renovation contractor who follows the LRRP rule by using lead-safe work practices and the cleaning protocol after the job is finished, lead-dust hazards will be effectively reduced. If, however, you are interested in having lead-dust testing done at the completion of your job, outlined below is some helpful information.

What is a lead-dust test?

- Lead-dust tests are wipe samples sent to a laboratory for analysis. You will get a report specifying the levels of lead found after your specific job.

How and when should I ask my contractor about lead-dust testing?

- Contractors are not required by EPA to conduct lead-dust testing. However, if you want testing, EPA recommends testing be conducted by a lead professional. To locate a lead professional who will perform an evaluation near you, visit EPA's website at epa.gov/lead/pubs/locate or contact the National Lead Information Center at 1-800-424-LEAD (5323).
- If you decide that you want lead-dust testing, it is a good idea to specify in your contract, before the start of the job, that a lead-dust test is to be done for your job and who will do the testing, as well as whether re-cleaning will be required based on the results of the test.
- You may do the testing yourself. If you choose to do the testing, some EPA-recognized lead laboratories will send you a kit that allows you to collect samples and send them back to the laboratory for analysis. Contact the National Lead Information Center for lists of EPA-recognized testing laboratories.



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FOR ADDITIONAL INFORMATION

You may need additional information on how to protect yourself and your children while a job is going on in your home, your building, or child care facility.

The National Lead Information Center at 1-800-424-LEAD (5323) or epa.gov/lead/nlic can tell you how to contact your state, local, and/or tribal programs or get general information about lead poisoning prevention.

- State and tribal lead poisoning prevention or environmental protection programs can provide information about lead regulations and potential sources of financial aid for reducing lead hazards. If your state or local government has requirements more stringent than those described in this pamphlet, you must follow those requirements.
- Local building code officials can tell you the regulations that apply to the renovation work that you are planning.
- State, county, and local health departments can provide information about local programs, including assistance for lead-poisoned children and advice on ways to get your home checked for lead.

The National Lead Information Center can also provide a variety of resource materials, including the following guides to lead-safe work practices. Many of these materials are also available at epa.gov/lead/pubs/brochure

- Steps to Lead Safe Renovation, Repair and Painting.
- Protect Your Family from Lead in Your Home
- Lead in Your Home: A Parent's Reference Guide



For the hearing impaired, call the Federal Information Relay Service at 1-800-877-8339 to access any of the phone numbers in this brochure.

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EPA CONTACTS

EPA Regional Offices

EPA addresses residential lead hazards through several different regulations. EPA requires training and certification for conducting abatement and renovations, education about hazards associated with renovations, disclosure about known lead paint and lead hazards in housing, and sets lead-paint hazard standards.

Your Regional EPA Office can provide further information regarding lead safety and lead protection programs at epa.gov/lead.

Region 1
(Connecticut, Massachusetts, Maine, New Hampshire, Rhode Island, Vermont)
Regional Lead Contact
U.S. EPA Region 1
Suite 1100
One Congress Street
Boston, MA 02114-2023
(888) 372-7341

Region 2
(New Jersey, New York, Puerto Rico, Virgin Islands)
Regional Lead Contact
U.S. EPA Region 2
2890 Woodbridge Avenue
Building 205, Mail Stop 225
Edison, NJ 08837-3679
(732) 321-6671

Region 3
(Delaware, Maryland, Pennsylvania, Virginia, Washington, DC, West Virginia)
Regional Lead Contact
U.S. EPA Region 3
1650 Arch Street
Philadelphia, PA
19103-2029
(215) 814-5000

Region 4
(Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee)
Regional Lead Contact
U.S. EPA Region 4
61 Forsyth Street, SW
Atlanta, GA 30303-8960
(404) 562-9900

Region 5
(Illinois, Indiana, Michigan, Minnesota, Ohio, Wisconsin)
Regional Lead Contact
U.S. EPA Region 5
77 West Jackson Boulevard
Chicago, IL 60604-3507
(312) 886-6003

Region 6
(Arkansas, Louisiana, New Mexico, Oklahoma, Texas)
Regional Lead Contact
U.S. EPA Region 6
1445 Ross Avenue,
12th Floor
Dallas, TX 75202-2733
(214) 665-7577

Region 7
(Iowa, Kansas, Missouri, Nebraska)
Regional Lead Contact
U.S. EPA Region 7
901 N. 5th Street
Kansas City, KS 66101
(913) 551-7003

Region 8
(Colorado, Montana, North Dakota, South Dakota, Utah, Wyoming)
Regional Lead Contact
U.S. EPA Region 8
1595 Wynkoop Street
Denver, CO 80202
(303) 312-6312

Region 9
(Arizona, California, Hawaii, Nevada)
Regional Lead Contact
U.S. Region 9
75 Hawthorne Street
San Francisco, CA 94105
(415) 947-8021

Region 10
(Alaska, Idaho, Oregon, Washington)
Regional Lead Contact
U.S. EPA Region 10
1200 Sixth Avenue
Seattle, WA 98101-1128
(206) 553-1200

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OTHER FEDERAL AGENCIES

CPSC

The Consumer Product Safety Commission (CPSC) protects the public from the unreasonable risk of injury or death from 15,000 types of consumer products under the agency's jurisdiction. CPSC warns the public and private sectors to reduce exposure to lead and increase consumer awareness. Contact CPSC for further information regarding regulations and consumer product safety.

CPSC
4330 East West Highway
Bethesda, MD 20814
Hotline 1-(800) 638-2772
cpsc.gov

CDC Childhood Lead Poisoning Prevention Branch

The Centers for Disease Control and Prevention (CDC) assists state and local childhood lead poisoning prevention programs to provide a scientific basis for policy decisions, and to ensure that health issues are addressed in decisions about housing and the environment. Contact CDC Childhood Lead Poisoning Prevention Program for additional materials and links on the topic of lead.

CDC Childhood Lead Poisoning Prevention Branch
4770 Buford Highway, MS F-40
Atlanta, GA 30341
(770) 488-3300
cdc.gov/nceh/lead

HUD Office of Healthy Homes and Lead Hazard Control

The Department of Housing and Urban Development (HUD) provides funds to state and local governments to develop cost-effective ways to reduce lead-based paint hazards in America's privately-owned low-income housing. In addition, the office enforces the rule on disclosure of known lead paint and lead hazards in housing, and HUD's lead safety regulations in HUD-assisted housing, provides public outreach and technical assistance, and conducts technical studies to help protect children and their families from health and safety hazards in the home. Contact the HUD Office of Healthy Homes and Lead Hazard Control for information on lead regulations, outreach efforts, and lead hazard control research and outreach grant programs.

U.S. Department of Housing and Urban Development
Office of Healthy Homes and Lead Hazard Control
451 Seventh Street, SW, Room 8236
Washington, DC 20410-3000
HUD's Lead Regulations Hotline
(202) 402-7698
hud.gov/offices/lead/

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SAMPLE PRE-RENOVATION FORM

This sample form may be used by renovation firms to document compliance with the Federal pre-renovation education and renovation, repair, and painting regulations.

Occupant Confirmation

Pamphlet Receipt

- I have received a copy of the lead hazard information pamphlet informing me of the potential risk of the lead hazard exposure from renovation activity to be performed in my dwelling unit. I received this pamphlet before the work began.

Printed Name of Owner-occupant

Signature of Owner-occupant

Signature Date

Renovator's Self Certification Option (for tenant-occupied dwellings only)

Instructions to Renovator: If the lead hazard information pamphlet was delivered but a tenant signature was not obtainable, you may check the appropriate box below.

- Declined** - I certify that I have made a good faith effort to deliver the lead hazard information pamphlet to the rental dwelling unit listed below at the date and time indicated and that the occupant declined to sign the confirmation of receipt. I further certify that I have left a copy of the pamphlet at the unit with the occupant.
- Unavailable for signature** - I certify that I have made a good faith effort to deliver the lead hazard information pamphlet to the rental dwelling unit listed below and that the occupant was unavailable to sign the confirmation of receipt. I further certify that I have left a copy of the pamphlet at the unit by sliding it under the door or by (fill in how pamphlet was left).

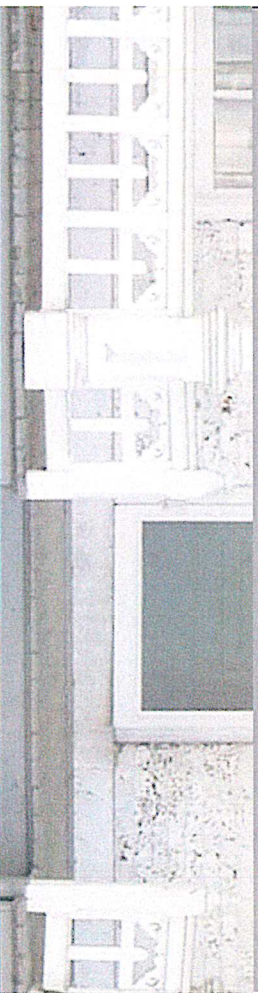
Printed Name of Person Certifying Delivery

Attempted Delivery Date

Signature of Person Certifying Lead Pamphlet Delivery

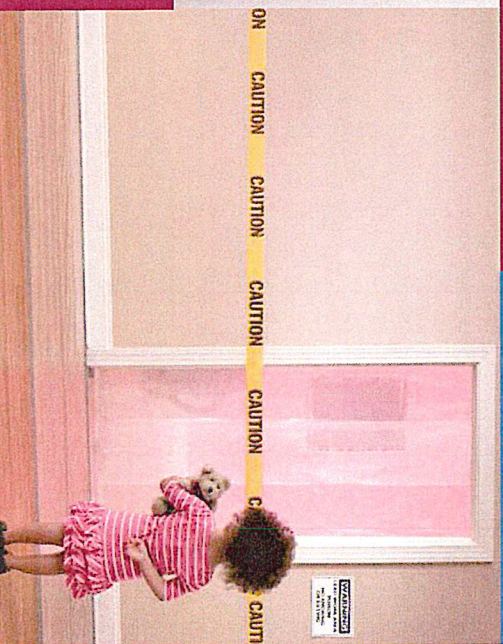
Unit Address

Note Regarding Mailing Option — As an alternative to delivery in person, you may mail the lead hazard information pamphlet to the owner and/or tenant. Pamphlet must be mailed at least seven days before renovation. Mailing must be documented by a certificate of mailing from the post office.



Small Entity Compliance Guide to Renovate Right EPA's Lead-Based Paint Renovation, Repair, and Painting Program

A handbook for contractors,
property managers and
maintenance personnel
working in homes and
child-occupied facilities
built before 1978.



Who Should Read this Handbook?

- Anyone who owns or manages housing or child-occupied facilities built before 1978
- Contractors who perform activities that disturb painted surfaces in homes and child-occupied facilities built before 1978 (including certain repairs and maintenance, and painting preparation activities).

About this Handbook

This handbook summarizes requirements of EPA's 2008 Lead-Based Paint Renovation, Repair and Painting Program Rule (as amended in 2010 and 2011), aimed at protecting against lead-based paint hazards associated with renovation, repair and painting activities. The rule requires workers to be trained to use lead-safe work practices and requires renovation firms to be EPA-certified; these requirements became fully effective April 22, 2010.

To ensure compliance, you should also read the complete rule on which the program is based. While EPA has summarized the provisions of the rule in this guide, the legal requirements that apply to renovation work are governed by EPA's 2008 Lead Rule. A copy of the rule is available on EPA's website at www.epa.gov/lead/paints/renovation.html.

A companion pamphlet, entitled *The Lead-Safe Certified Trade to Renovate Right: Important Lead Hazard Information for Families, Child Care Providers, and Schools* (EPA-740-K-10-001), has been prepared in conjunction with the rule for distribution to persons affected by work that disturbs lead-based paint. (See page 17 for information on how to get copies of the rule, the *Renovate Right* pamphlet, and other related materials.)

Other state or local requirements that are different from or more stringent than the federal requirements may apply in your state. For example, Federal law allows EPA to authorize states to administer their own program in lieu of the federal lead program. Even in states without an authorized lead program, a state may promulgate its own rules that may be different or go beyond the federal requirements. For more information on the rules that apply in your state, please contact the National Lead Information Center at 1-800-424-LEAD (5323).

Your feedback is important. Please review this guide and contact the National Lead Information Center at 1-800-424-LEAD (5323) with any comments regarding its usefulness and readability, and improvements you think are needed.

This document is published by the Environmental Protection Agency (EPA) as the official compliance guide for small entities, as required by the Small Business Regulatory Enforcement Fairness Act of 1996 (SBREFA). Before you begin using the guide, you should know that the information in this guide was originally published in June 2008, and was revised in July 2010 and September 2011 to address regulatory revisions. EPA is continually improving and upgrading its rules, policies, compliance programs, and outreach efforts. To find out if EPA has revised or supplemented the information in this guide call the National Lead Information Center at 1-800-424-LEAD (5323).

What Is the Lead-Based Paint Renovation, Repair and Painting Program (RRP)?

- The Lead-Based Paint Renovation, Repair and Painting Program is a federal regulatory program affecting contractors, property managers, and others who disturb painted surfaces.
- It applies to residential houses, apartments, and child-occupied facilities such as schools and day-care centers built before 1978.
- It includes pre-renovation education requirements as well as training, certification, and work practice requirements.
 - Pre-renovation education requirements:
 - Contractors, property managers, and others who perform renovations for compensation in residential houses, apartments, and child-occupied facilities built before 1978 are required to distribute a lead pamphlet before starting renovation work.
 - Training, certification, and work practice requirements:
 - Firms are required to be certified, their employees must be trained (either as a certified renovator or on-the-job by a certified renovator) in use of lead-safe work practices, and lead-safe work practices that minimize occupants' exposure to lead hazards must be followed.
 - Renovation is broadly defined as any activity that disturbs painted surfaces and includes most repair, remodeling, and maintenance activities, including window replacement.
- The program includes requirements implementing both Section 402(c) and 406(b) of the Toxic Substances Control Act (TSCA). (www.epa.gov/lead/paints/rlfileencl.html)
- EPA's lead renovation regulations can be found at 40 CFR Part 745, Subpart E.

How Can this Handbook Help Me?

- Understanding the lead program's requirements can help you protect your customers from the hazards of lead and can, therefore, mean more business for you.
- This handbook presents simple steps to follow to comply with the EPA's lead program. It also lists ways these steps can be easily incorporated into your work.
- Distributing the lead pamphlet and incorporating required work practices into your job site will help protect your customers and occupants from the hazards of lead-based paint.

Who Must Follow the Renovation, Repair and Painting Rules' Requirements?

In general, anyone who is paid to perform work that disturbs paint in housing and child-occupied facilities built before 1978, this may include, but is not limited to:

- Residential rental property owners/managers
- General contractors
- Special trade contractors, including
 - Painters
 - Plumbers
 - Carpenters
 - Electricians



What Activities Are Subject to the Lead Renovation, Repair and Painting Program?

In general, any activity that disturbs paint in pre-1978 housing and child-occupied facilities, including:

- Remodeling and repair/maintenance
- Electrical work
- Plumbing
- Painting preparation
- Carpentry
- Window replacement



What Housing or Activities Are Excluded and Not Subject to the Rule?

- Housing built in 1978 or later
- Housing for elderly or disabled persons, unless children under 6 reside or are expected to reside there.
- Zero-bedroom dwellings (studio apartments, dormitories, etc.)
- Housing or components that have been declared lead-free. Such a declaration can be made by a certified inspector or risk assessor. Also, a certified renovator may declare specific components lead-free using an EPA recognized test kit or by collecting paint chip samples and obtaining test results from an EPA recognized laboratory showing the components do not contain lead-based paint
- Minor repair and maintenance activities that disturb 6 square feet or less of paint per room inside, or 20 square feet or less on the exterior of a home or building.
- Note: minor repair and maintenance activities do not include window replacement and projects involving demolition or prohibited practices.

What Does the Program Require Me To Do?

Pre-renovation education requirements.

- In housing built before 1978, you must:
- Distribute EPA's lead pamphlet (www.epa.gov/lead/pubs/practure.html) to the owner and occupants before renovation starts.
- In a child-occupied facility, you must:
- Distribute the lead pamphlet to the owner of the building or an adult representative of the child-occupied facility before the renovation starts
- Either distribute renovation notices to parents/guardians of the children attending the child-occupied facility, or post informational signs about the renovation or repair job
- For work in common areas of multi-family housing, you must:
- Either distribute renovation notices to tenants or post informational signs about the renovation or repair job.
- Informational signs must:
- Be posted where they will be seen.
- Describe the nature, locations, and dates of the renovation; and
- Be accompanied by the lead pamphlet or by information on how parents and guardians can get a free copy (see page 29 for information on obtaining copies)
- Obtain confirmation of receipt of the lead pamphlet (see page 23) from the owner, adult representative, or occupants (as applicable), or a certificate of mailing from the post office
- Retain records for three years.
- Note: Pre-renovation education requirements do not apply to emergency renovations. Emergency renovations include interim controls performed in response to a resident child with an elevated blood-lead level.
- Training, Certification, and Work Practice Requirements.
- All firms must be certified (even sole-proprietors).
- All renovators must be trained.
- Lead-safe work practices must be followed. Examples of these practices include:
- Work-area containment to prevent dust and debris from leaving the work area.
- Prohibition of certain work practices like open-flame burning and the use of power tools without HEPA exhaust control
- Thorough clean up followed by a verification procedure to minimize exposure to lead-based paint hazards

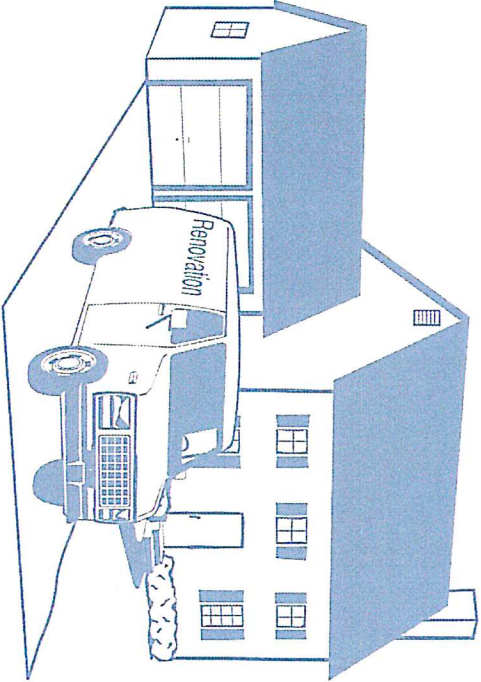
How Does a Firm Become Certified?

Firms must apply to EPA for certification to perform renovations or dust sampling. To apply, a firm must submit to EPA a completed "Application for Firms," signed by an authorized agent of the firm, and pay the correct amount of fees. To obtain a copy of the "Application for Firms" contact the NLEIC at 1-800-424-LEAD (5323) or visit www.epa.gov/lead/safe

What Are the Responsibilities of a Certified Firm?

Firms performing renovations must ensure that

1. All individuals performing activities that disturb painted surfaces on behalf of the firm are either certified renovators or have been trained by a certified renovator
2. A certified renovator is assigned to each renovation and performs all of the certified renovator responsibilities.
3. All renovations performed by the firm are performed in accordance with the work practice standards of the Lead-Based Paint Renovation, Repair, and Painting Program (see the flowchart on page 9 for details about the work practice standards).
4. Pre-renovation education and lead pamphlet distribution requirements of the Lead-Based Paint Renovation, Repair, and Painting Program are performed.
5. The program's recordkeeping requirements are met



How Does a Renovator Become Certified?

To become a certified renovator an individual must successfully complete an eight-hour initial renovator training course offered by an accredited training provider (training providers are accredited by EPA, or by an authorized state or tribal program). The course completion certificate serves as proof of certification. To find a trainer in your area contact the NLEIC at 1-800-424-LEAD (5323) or visit www.epa.gov/lead/safe.

Are There Streamlined Requirements for Contractors with Previous Lead Training?

Yes. Individuals who have successfully completed an accredited lead abatement worker or supervisor course, or individuals who have successfully completed certain EPA, Department of Housing and Urban Development (HUD), or EPA/HUD model renovation training courses before October 4, 2011, need only take a four-hour refresher renovator training course instead of the eight-hour initial renovator training course to become certified. For a list of qualified previous training courses contact the NLEIC at 1-800-424-LEAD (5323) or visit www.epa.gov/lead/pmh/trainerinstructions.html#refresher

What Are the Responsibilities of a Certified Renovator?

Certified renovators are responsible for ensuring overall compliance with the Lead-Based Paint Renovation, Repair, and Painting Program's requirements for lead-safe work practices at renovations they are assigned (see the flowchart on page 9 for details about the work practice standards). A certified renovator:

1. Must provide on-the-job training to other workers (who have not taken the certified renovator training course) on the lead safe work practices to be used in performing their assigned tasks.
2. Must be physically present at the work site when warning signs are posted, while the work-area containment is being established, and while the work-area cleaning is performed.
3. Must regularly direct work being performed by other individuals to ensure that the work practices are being followed, including maintaining the integrity of the containment barriers and ensuring that dust or debris does not spread beyond the work area.
4. When requested by the party contracting for renovation services, must use an EPA-recognized test kit or must collect paint chip samples, submit them to an EPA-recognized laboratory, and obtain test results from the laboratory to determine whether components affected by the renovation contain lead-based paint. (For more information regarding test kits call the National Lead Information Center at 1-800-424-LEAD (5323), or check our web site at www.epa.gov/lead/pmh/renovation.html) Note: you must assume lead-based paint is present for housing and buildings covered by this rule, unless testing is done that determines the components affected are lead-free.
5. Must be available, either on-site or by telephone, at all times renovations are being conducted.
6. Must perform project cleaning verification.
7. Must have with them at the work site copies of their initial course completion certificate and their most recent refresher course completion certificate
8. Must prepare required records.

How Long Do Firm and Renovator Certifications Last?

To maintain their certification, individual renovators and firms must be re-certified by EPA every five years. A firm must submit to EPA a completed "Application for Firms," signed by an authorized agent of the firm, and pay the correct amount of fees. Individual renovators must successfully complete a refresher training course provided by an accredited training provider.

What Are the Recordkeeping Requirements?

- All documents must be retained for three years following the completion of a renovation.
- Records that must be retained include:
 - Reports certifying that lead-based paint is not present.
 - Records relating to the distribution of the lead pamphlet.
 - Documentation of compliance with the requirements of the Lead-Based Paint Renovation, Repair, and Painting Program. This information must also be given to the owner and, if different, the occupant of the housing or unit that was renovated (EPA has prepared a sample form that is available at www.epa.gov/lead/pubs/samplechecklist.pdf).

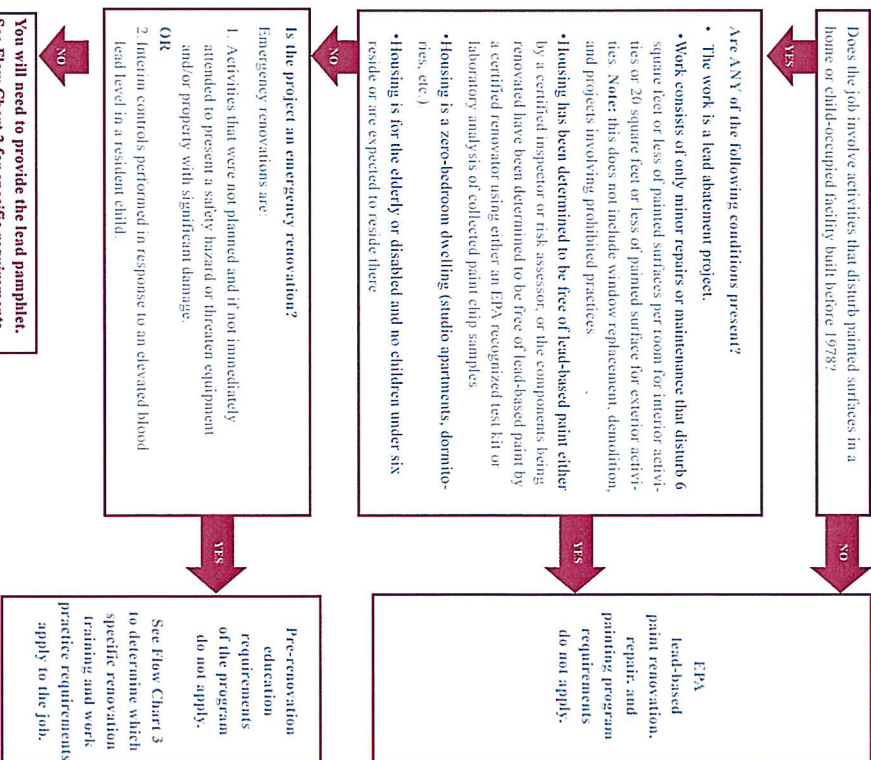
What Are the Required Work Practices?

The flow charts on the following pages will help determine if your project is subject to the Lead-Based Paint Renovation, Repair and Painting Program's requirements and, if so, the specific requirements for your particular project. The flowcharts, and other information included in this guide, are not intended to be a replacement for official training.

EPA's Lead Program Rule At-A-Glance

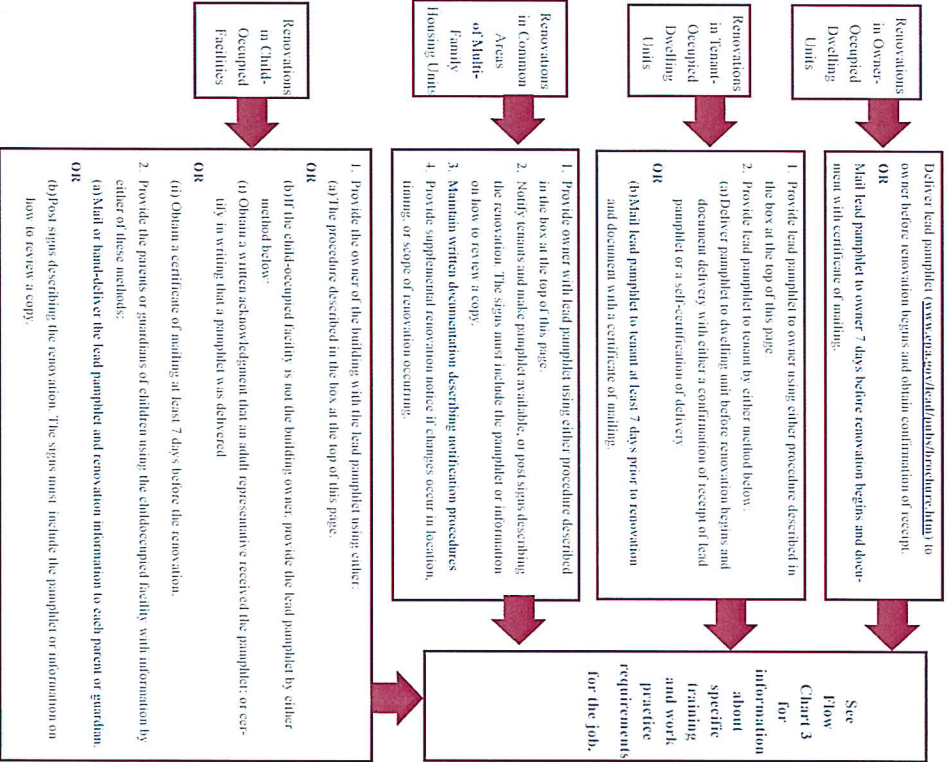
Do the Requirements Apply to the Renovation?

If you will be getting paid to do work that disturbs painted surfaces in a pre-1978 home, apartment building, or child-occupied facility, answer the questions below to determine if the EPA lead program requires you to distribute the lead pamphlet and/or if you will need to comply with training, certification, and work practice requirements when conducting the work.

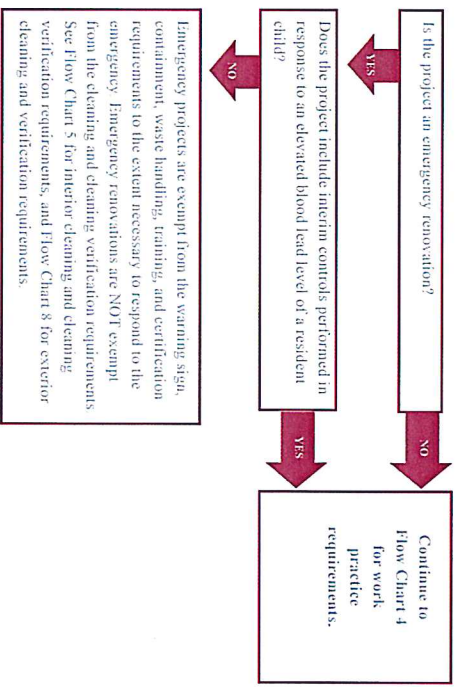


Flow Chart 1

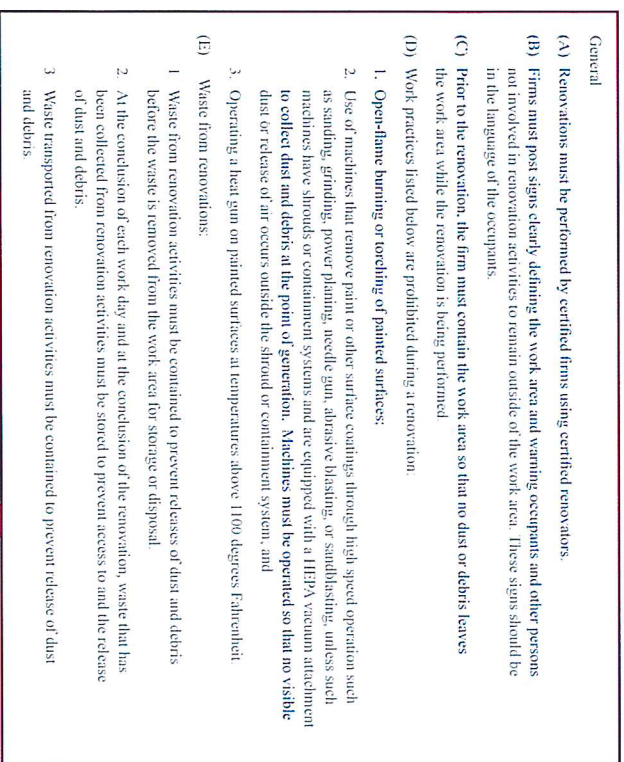
How Do I Comply with the Pre-Renovation Education Requirements?
 Requirements to distribute pre-renovation educational materials vary based on the location of the renovation. Select the location below that best describes the location of your project, and follow the applicable procedure on the right.



Do the Renovation Training and Work Practices Apply?



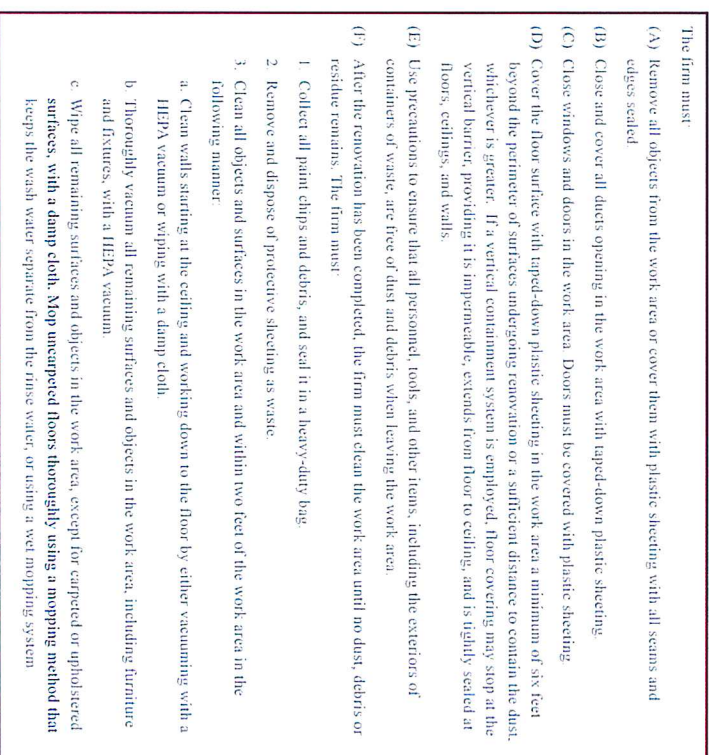
Work Practice Requirements



Interior Renovation Projects, See Flow Chart 5.

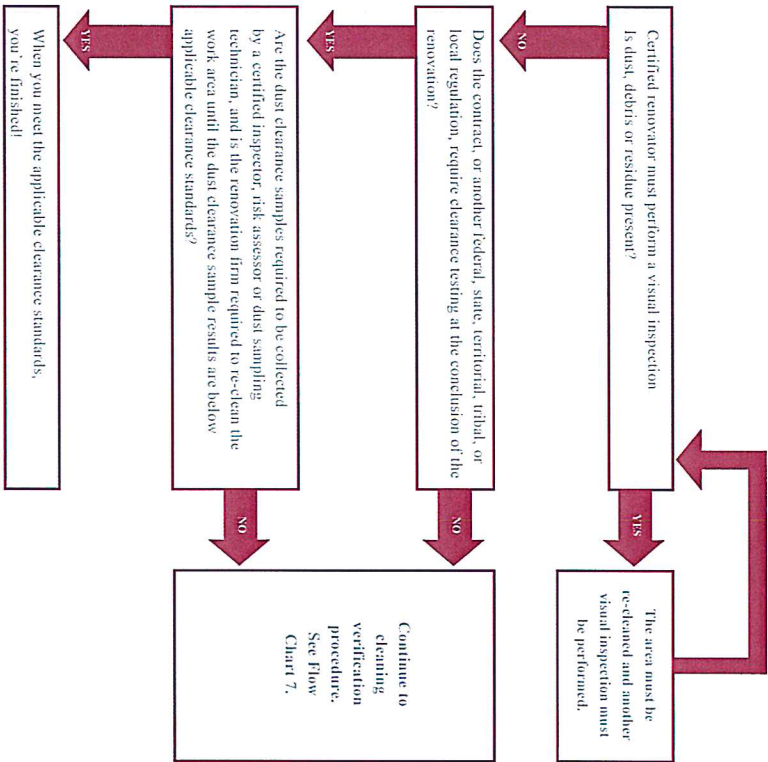
Exterior Renovation Projects, See Flow Chart 8.

Work Practice Requirements Specific to Interior Renovations



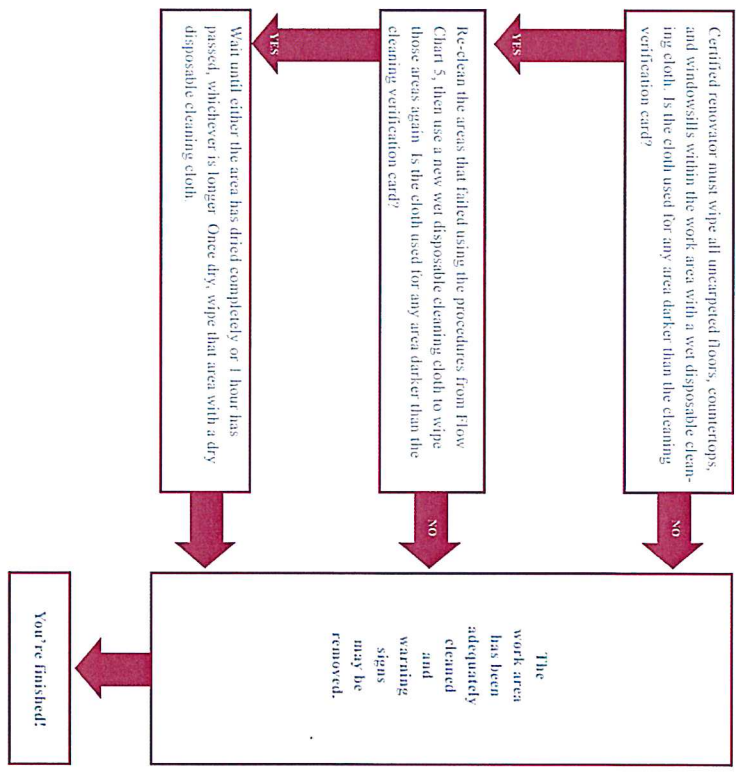
Cleaning verification is required to ensure the work area is adequately cleaned and ready for re-occupancy. See Flow Chart 6 for instructions on performing cleaning verification for interior projects.

Interior Cleaning Verification: Visual Inspection and Optional Clearance Testing



Flow Chart 6

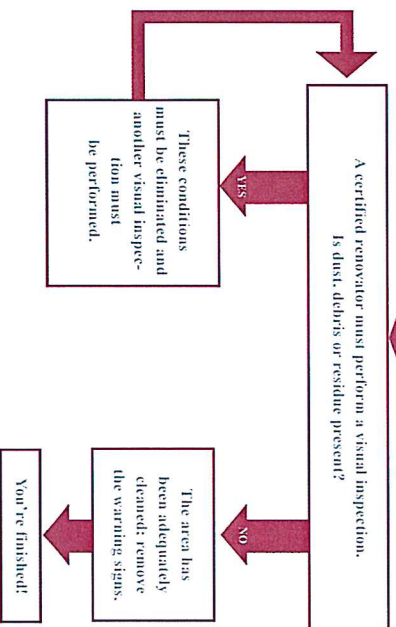
Interior Cleaning Verification: Floors, Countertops, and Window Sills
 Note: For areas greater than 40 square feet, separate the area into sections and use a new disposable cleaning cloth for each section.



Flow Chart 7

Work Practice Requirements Specific to Exterior Renovations

- The firm must:
- (A) Close all doors and windows within 20 feet of the renovation.
 - (B) Ensure that doors within the work area that will be used while the job is being performed are covered with plastic sheeting in a manner that allows workers to pass through while containing dust and debris.
 - (C) Cover the ground with plastic sheeting or other disposable impermeable material extending a minimum of 10 feet beyond the perimeter or a sufficient distance to collect falling paint debris, whichever is greater. If a property line prevents 10 feet of such ground covering, then erect vertical containment or equivalent extra precautions to prevent contamination of adjacent buildings and property.
 - (D) In situations such as where work areas are in close proximity to other buildings, windy conditions, etc., the renovation firm must take extra precautions in containing the work area, like vertical containment.
 - (E) After the renovation has been completed, the firm must clean the work area until no dust, debris or residue remains. The firm must:
 1. Collect all paint chips and debris, and seal it in a heavy-duty bag.
 2. Remove and dispose of protective sheeting as waste.
 3. Waste transported from renovation activities must be contained to prevent release of dust and debris.



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Flow Chart 8

How Is My Compliance Determined, and What Happens if the Agency Discovers a Violation?

To maximize compliance, EPA implements a balanced program of compliance assistance, compliance incentives, and traditional law enforcement. EPA knows that small businesses that must comply with complicated new statutes or rules often want to do the right thing, but may lack the requisite knowledge, resources, or skills. Compliance assistance information and technical advice helps small businesses to understand and meet their environmental obligations. Compliance incentives, such as EPA's Small Business Policy, apply to businesses with 100 or fewer employees and encourage persons to voluntarily discover, disclose, and correct violations before they are identified by the government (more information about EPA's Small Business Policy is available at www.epa.gov/compliance/incentives/smallbusiness/index.html). EPA's enforcement program is aimed at protecting the public by targeting persons or entities who neither comply nor cooperate to address their legal obligations.

EPA uses a variety of methods to determine whether businesses are complying, including inspecting work sites, reviewing records and reports, and responding to citizen tips and complaints. Under TSCA, EPA (or a state, if this program has been delegated to it) may file an enforcement action against violators seeking penalties of up to \$37,500 per violation, per day. The proposed penalty in a given case will depend on many factors, including the number, length, and severity of the violations, the economic benefit obtained by the violator, and its ability to pay. EPA has policies in place to ensure penalties are calculated fairly. These policies are available to the public. In addition, any company charged with a violation has the right to contest EPA's allegations and proposed penalty before an impartial judge or jury.

EPA encourages small businesses to work with the Agency to discover, disclose, and correct violations. The Agency has developed self-disclosure, small business, and small community policies to modify penalties for small and large entities that cooperate with EPA to address compliance problems. In addition, EPA has established compliance assistance centers to serve over one million small businesses (see Construction Industry Compliance Assistance Center for information regarding this rule at www.ciccenter.org). For more information on compliance assistance and other EPA programs for small businesses, please contact EPA's Small Business Ombudsman at 202-566-2075.

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Frequent Questions

What is the legal status of this guide?

This guide was prepared pursuant to section 212 of SRI/LEPA. EPA has tried to help explain in this guide what you must do to comply with the Toxic Substances Control Act (TSCA) and EPA's lead regulations. However, this guide has no legal effect and does not create any legal rights. Compliance with the procedures described in this guide does not establish compliance with the rule or establish a presumption or inference of compliance. The legal requirements that apply to renovation work are governed by EPA's 2008 Lead Rule, which controls if there is any inconsistency between the rule and the information in this guide.

Is painting considered renovation if no surface preparation activity occurs?

No. If the surface to be painted is not disturbed by sanding, scraping, or other activities that may cause dust, the work is not considered renovation and EPA's lead program requirements do not apply. However, painting projects that involve surface preparation that disturbs paint, such as sanding and scraping, would be covered.

What if I renovate my own home?

EPA's lead program rules apply only to renovations performed for compensation, therefore, if you work on your own home, the rules do not apply. EPA encourages homeowners to use lead-safe work practices, nonetheless, in order to protect themselves, their families, and the value of their homes.

Is a renovation performed by a landlord or employees of a property management firm considered a compensated renovation under EPA's lead program rules?

Yes. The receipt of rent payments or salaries derived from rent payments is considered compensation under EPA's lead program. Therefore, renovation activities performed by landlords or employees of landlords are covered.

Do I have to give out the lead pamphlet seven days prior to beginning renovation activities?

The 7-day advance delivery requirement applies only when you deliver the lead pamphlet by mail; otherwise, you may deliver the pamphlet anytime before the renovation begins so long as the renovation begins within 60 days of the date that the pamphlet is delivered. For example, if your renovation is to begin May 30, you may deliver the pamphlet in person anytime between April 1 and start of the project on May 30, or you may deliver the pamphlet by mail anytime between April 1 and May 23.

Tips for Easy Compliance

1. For your convenience the sample form on page 23 of this handbook is included in the *Renovate Right* lead pamphlet (see page 29 for information on how to get copies). Attach the form to the back of your customer renovation or repair contracts. The completed form can be filed along with your regular paperwork.
2. Plan ahead to obtain enough copies of the lead pamphlet (see page 29 for information on how to get copies of the pamphlet).

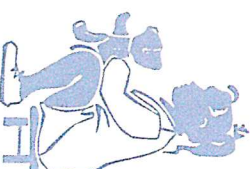
Where Can I Get More Information?

Further information is available from the National Lead Information Center (800-424-LEAD) and on the Internet at www.epa.gov/lead. Available resources include:

- Full text version of the Lead-Based Paint Renovation, Repair, and Painting Program regulation.
- Frequent Questions which provide more detailed information on the rule's requirements.
- A downloadable version of the lead pamphlet.

Why Is Lead Paint Dangerous?

Lead gets into the body when it is swallowed or inhaled. People, especially children, can swallow lead dust as they eat, play, and do other normal hand-to-mouth activities. People may also breathe in lead dust or fumes if they disturb lead-based paint. People who sand, scrape, burn, brush, blast or otherwise disturb lead-based paint risk unsafe exposure to lead.



Lead is especially dangerous to children under 6 years of age.

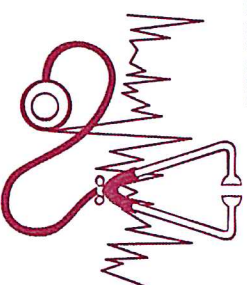
Lead can affect children's brains and developing nervous systems, causing:

- Reduced IQ and learning disabilities.
- Behavioral problems.

Even children who appear healthy can have dangerous levels of lead in their bodies.

Lead is also harmful to adults. In adults, low levels of lead can pose many dangers, including:

- High blood pressure and hypertension.
- Pregnant women exposed to lead can transfer lead to their fetuses.



Other Resources

For additional information on how to protect yourself and your customers from lead paint hazards, visit www.epa.gov/lead or call the National Lead Information Center at 1-800-424-LEAD (5323). Available documents include:

- *The Lead-Safe Certified Guide to Renovation, Repair, and Painting: Important Lead Hazard Information for Families, Child Care Providers and Schools*
- *Joint EPA-HUD Curriculum: Lead Safety for Remodeling, Repair, and Painting*
- *Steps to Lead-Safe Renovation, Repair and Painting*
- *High Lead Poisoning with a Healthy Diet*
- *Protect Your Family from Lead in Your Home*
- *Lead in Your Home: A Parent's Reference Guide*



Key Terms

Certificate of Mailing — A written verification from the Postal Service that you mailed the lead pamphlet to an owner or a tenant. This is less expensive than certified mail, which is also acceptable for meeting the Lead-Based Paint Renovation, Repair, and Painting Program requirements. (Note: If using this delivery option, you must mail the pamphlet at least seven days prior to the start of renovation.)

Certified Inspector or Risk Assessor — An individual who has been trained and is certified by EPA or an authorized state or Indian Tribe to conduct lead-based paint inspections or risk assessments.

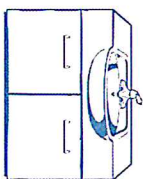
Child-occupied Facility — May include, but is not limited to, day care centers, pre-schools and kindergarten classrooms. Child-occupied facilities may be located in target housing or in public or commercial buildings. The regulation defines a “child-occupied facility” as a building, or portion of a building, constructed prior to 1978, visited regularly by the same child, under 6 years of age, on at least two different days within any week (Sunday through Saturday period), provided that each day’s visit lasts at least three hours and the combined weekly visits last at least six hours; and the combined annual visits last at least 60 hours. Child-occupied facilities may be located in target housing, or in public or commercial buildings. With respect to common areas in public or commercial buildings that contain child-occupied facilities, the child-occupied facility encompasses only those common areas that are routinely used by children under age 6, such as restrooms and cafeterias. Common areas that children under age 6 only pass through, such as hallways, stairways, and garages are not included. In addition, with respect to exteriors of public or commercial buildings that contain child-occupied facilities, the child-occupied facility encompasses only the exterior sides of the building that are immediately adjacent to the child-occupied facility or the common areas routinely used by children under age 6.

Cleaning Verification Card — a card developed and distributed by EPA for the purpose of determining, through comparison of wet and dry disposable cleaning cloths with the card, whether post-renovation cleaning has been properly completed.

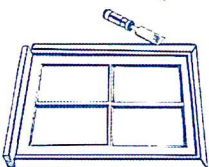
Common Area — A portion of a building that is generally accessible to all residents or users. Common areas include (but are not limited to) hallways, stairways, laundry rooms, recreational rooms, playgrounds, community centers, and fenced areas. The term applies to both interiors and exteriors of the building.

Component — A specific design or structural element or fixture distinguished by its form, function, and location. A component can be located inside or outside the dwelling. Examples:

- Interior**
- Ceilings
 - Crown molding
 - Walls
 - Floors
 - Doors and trim
 - Fireplaces
 - Kitchens
 - Staircases
 - Stair treads
 - Windows and trim
 - Bath-in cabinets
 - Beams
 - Bathroom vanities
 - Counter tops
 - Air conditioners



- Exterior**
- Painted roofing
 - Chimneys
 - Flashing
 - Gutters and downspouts
 - Ceilings
 - Soffits
 - Doors and trim
 - Fences
 - Floors
 - Decks
 - Handrails
 - Window sills and cashes
 - Air conditioners



Confirmation of Receipt of Lead Hazard Information Pamphlet — A form that is signed by the owner or tenant of the housing confirming that they received a copy of the lead pamphlet before the renovation began. (See sample on page 23.)

Emergency Renovation — Unplanned renovation activities done in response to a sudden, unexpected event which, if not immediately attended to, presents a safety or public health hazard or threatens property with significant damage.

Examples

- *Renovation to repair damage from a tree that fell on a house.*
- *Renovation to repair a burst water pipe in an apartment complex.*
- *Interim controls performed in response to an elevated blood lead level in a resident child.*

Firm — A company, partnership, corporation, sole proprietorship or individual doing business, association, or other business entity, a Federal, State, Tribal, or local government agency, or a nonprofit organization.

General Contractor — One who contracts for the construction of an entire building or project, rather than for a portion of the work. The general contractor hires subcontractors (e.g. plumbing, electrical, etc.), coordinates all work, and is responsible for payment to subcontractors.

Housing for the Elderly — Retirement communities or similar types of housing specifically reserved for households of one or more persons 62 years of age or older at the time the unit is first occupied.

Interim Controls — Interim controls means a set of measures designed to temporarily reduce human exposure or likely exposure to lead-based paint hazards, including specialized cleaning, repairs, maintenance, painting, temporary containment, ongoing monitoring of lead-based paint hazards or potential hazards, and the establishment and operation of management and resident education programs.

Lead Abatement — Work designed to permanently eliminate lead-based paint hazards. If you are hired to do lead-abatement work only, the Lead-Based Paint Renovation, Repair, and Painting Program does not apply. Abatement does not include renovation, remodeling, or other activities done to repair, restore, or redesign a given building — even if such renovation activities incidentally eliminate lead-based paint hazards. (Note: Some states define this term differently than described above. Consult your state officials if you are not sure how “lead abatement” is defined in your state.)

Lead Pamphlet — The lead hazard information pamphlet for the purpose of pre-renovation education is *The LeadSafe Certified Guide to Renovate Right: Important Lead Hazard Information for Families, Child Care Facilities and Schools*, or an EPA-approved alternative pamphlet. (See page 29 for information on obtaining copies.)

Minor Repair and Maintenance — Activities that disrupt 6 square feet or less of painted surface per room for interior activities or 20 square feet or less of painted surface for exterior activities where none of the prohibited work practices is used and where the work does not involve window replacement or demolition of painted surface areas. When removing painted components, or portions of painted components, the entire surface area removed is the amount of painted surface disturbed. Jobs, other than emergency renovations, performed in the same room within the same 30 days must be considered the same job for the purpose of determining whether the job is a minor repair and maintenance activity.

Owner — Any person or entity that has legal title to housing, including individuals, partnerships, corporations, government agencies, Indian Tribes, and nonprofit organizations.

Painted Surface — A component surface covered in whole or in part with paint or other surface coatings.

Prohibited Practices — Work practices listed below are prohibited during a renovation.

- Open-flame burning or torching of painted surfaces;
- Use of machines that remove paint or other surface coatings through high speed operation such as sanding, grinding, power planing, needle gun, abrasive blasting, or sandblasting, unless such machines have shrouds or containment systems and are equipped with a HEPA vacuum attachment to collect dust and debris at the point of generation. Machines must be operated so that no visible dust or release of air occurs outside the shroud or containment system.
- Operating a heat gun on painted surfaces at temperatures above 1100 degrees Fahrenheit.

Record of Notification — A written statement documenting the steps taken to notify occupants of renovation activities in common areas of multi-family housing. (See page 25 for sample.)

Renovation — Modification of all or part of any existing structure that disturbs a painted surface, except for some specifically exempted activities (e.g., minor repair and maintenance). Includes:

- Removal/modification of painted surfaces, components, or structures
- Surface preparation activities (sanding/scrapping/other activities that may create paint dust)
- Window replacement

Examples

1. Demolition of painted walls or ceilings
2. Replastering
3. Plumbing repairs or improvements
4. Any other activities which disturb painted surfaces

Renovation Notice — Notice to tenants of renovations in common areas of multi-family housing. (See sample form on page 25.) Notice must describe nature, location, and expected timing of renovation activity, and must explain how the lead pamphlet may be obtained free of charge.

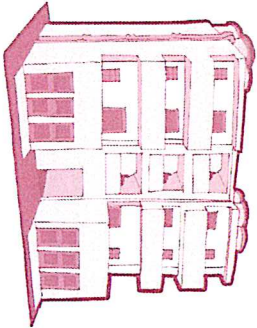
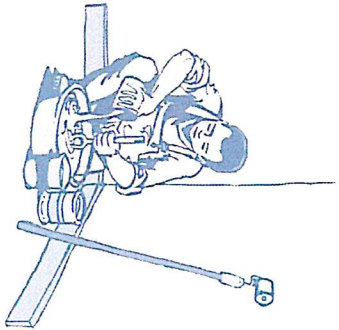
Renovator — A person who either performs or directs workers who perform renovation. A certified renovator is a renovator who has successfully completed a renovator course accredited by EPA or an EPA authorized State or Tribal program. (Note: Because the term "renovation" is defined broadly by the Lead-Based Paint Renovation, Repair, and Painting Program, many contractors who are not generally considered "renovators", as that term is commonly used, are considered to be "renovators" under the program and must follow the rule's requirements.)

Self-Certification of Delivery — An alternative method of documenting delivery of the lead hazard information pamphlet to a tenant. This method may be used whenever the tenant is unavailable or unwilling to sign a confirmation of receipt of lead pamphlet. (See sample form on page 23.) (Note: This method is not a permissible substitute for delivery of the lead pamphlet to an owner.)

Supplemental Renovation Notice — additional notification that is required when the scope, location, or timing of project changes.

Vertical Containment — A vertical barrier consisting of plastic sheeting or other impermeable material over scaffolding or a rigid frame, or an equivalent system of containing the work area. Vertical containment is required for some exterior renovations but it may be used on any renovation.

Zero-Bedroom Dwelling — Any residential dwelling where the living area is not separated from the sleeping area. This term includes efficiency and studio apartments, dormitory housing, and military barracks.



Sample Pre-Renovation Form

This sample form may be used by firms to document compliance with the requirements of the Federal Lead-Based Paint Renovation, Repair, and Painting Program.

Occupant Confirmation

Pamphlet Receipt

I have received a copy of the lead hazard information pamphlet informing me of the potential risk of the lead hazard exposure from renovation activity to be performed in my dwelling unit. I received this pamphlet before the work began.

Printed Name of Owner-occupant _____

Signature of Owner-occupant _____

Signature Date _____

Renovator's Self-Certification Option (for tenant-occupied dwellings only)

Instructions to Renovator: If the lead hazard information pamphlet was delivered but a tenant signature was not obtainable, you may check the appropriate box below.

Declined — I certify that I have made a good faith effort to deliver the lead hazard information pamphlet to the rental dwelling unit listed below, at the time and time indicated, and that the occupant declined to sign the confirmation of receipt. I further certify that I have left a copy of the pamphlet at the unit with the occupant.

Unavailable for signature — I certify that I have made a good faith effort to deliver the lead hazard information pamphlet to the rental dwelling unit listed below, and that the occupant was unavailable to sign the confirmation of receipt. I further certify that I have left a copy of the pamphlet at the unit by sliding it under the door or by (fill in how pamphlet was left).

Printed Name of Person Certifying Delivery _____

Attempted Delivery Date _____

Signature of Person Certifying Lead Pamphlet Delivery _____

Unit Address _____

Note Regarding Mailing Option — As an alternative to delivery in person, you may mail the lead hazard information pamphlet to the owner and/or tenant. Pamphlet must be mailed at least 7 days before renovation. Mailing must be documented by a certificate of mailing from the post office.



Sample Forms (continued)

Renovation Notice — For use in notifying tenants of renovations in common areas of multi-family housing.

The following renovation activities will take place in the following locations:

Activity (e.g., sanding, window replacement)

Location (e.g., lobby, recreation center)

The expected starting date is _____ and the expected ending date is _____.
Because this is an older building built before 1978, some of the paint disturbed during the renovation may contain lead. You may obtain a copy of the pamphlet, *Renovate Right*, by telephoning me at _____. Please leave a message and be sure to include your name, phone number and address. I will either mail you a pamphlet or slide one under your door.

Date _____ Printed name of renovator _____

Signature of renovator _____

Record of Tenant Notification Procedures

Project Address _____

Street (apt. #) _____

City _____ State _____ Zip Code _____

Owner of multi-family housing _____ Number of dwelling units _____

Method of delivering notice forms (e.g., delivery to units, delivery to mailboxes of units) _____

Name of person delivering notices _____

Signature of person delivering notices _____ Date of Delivery _____



Sample Renovation Recordkeeping Checklist

- ____ Name of Firm _____
- ____ Date and Location of Renovation _____
- ____ Brief Description of Renovation: _____
- ____ Name of Assigned Renovator: _____
- ____ Name(s) of Trained Worker(s), if used: _____
- ____ Name of Dust Sampling Technician, Inspector, or Risk Assessor, if used: _____
- ____ Copies of renovator and dust sampling technician qualifications (training certificates, certifications) on file: _____
- ____ Certified renovator provided training to workers on (check all that apply):
 - ____ Posting warning signs _____ Setting up plastic containment barriers
 - ____ Maintaining containment _____ Avoiding spread of dust to adjacent areas
 - ____ Waste Handling _____ Post-renovation cleaning
 - ____ Test kit or test results from an EPA-recognized laboratory on collected paint chip sample, used by certified renovator to determine whether lead was present on components affected by renovation (identify method used, type of test kit used (if applicable), laboratory used to conduct paint chip analysis, describe sampling locations and results): _____
- ____ Warning signs posted at entrance to work area
- ____ Work area contained to prevent spread of dust and debris
 - ____ All objects in the work area removed or covered (interiors)
 - ____ HVAC ducts in the work area closed and covered (interiors)
 - ____ Windows in the work area closed (interiors)
 - ____ Windows in and within 20 feet of the work area closed (exteriors)
 - ____ Doors in the work area closed and sealed (interiors)
 - ____ Doors in and within 20 feet of the work area closed and sealed (exteriors)
 - ____ Doors that must be used in the work area covered to allow passage but prevent spread of dust
 - ____ Floors in the work area covered with taped-down plastic (interiors)
 - ____ Ground covered by plastic extending 10 feet from work area—plastic anchored to building and weighed down by heavy objects (exteriors)
 - ____ Vertical containment installed if property line prevents 10 feet of ground covering, or if necessary to prevent migration of dust and debris to adjacent property (exteriors)
 - ____ Waste contained on-site and while being transported off-site
 - ____ Work site properly cleaned after renovation
 - ____ All chips and debris picked up, protective sheeting rinsed, folded dirty side inward, and taped for removal
 - ____ Work area surfaces and objects cleaned using HEPA vacuum and/or wet cloths or mops (interiors)
- ____ Certified renovator performed post-renovation cleaning verification (describe results, including the number of wet and dry cloths used) _____
- ____ If dust clearance testing was performed instead, attach a copy of report _____
- ____ I certify under penalty of law that the above information is true and complete.

____ Name and title _____ Date _____



Where Can I Get Copies of the Lead Pamphlet?

For single copies, in Spanish or English, of *The Lead-Safe Certified Guide to Renovate Right: Important Lead Hazard Information for Families, Child Care Facilities and Schools* (EPA-740-K-10-001), call the National Lead Information Center (NLIC) at 1-800-424-LEAD. For any orders, be sure to use the appropriate stock reference number listed above.

There are four ways to get multiple copies:

1. Obtain downloadable copies (PDF) from the EPA website at www.epa.gov/lead/lnhsh/renovate.htm
2. Call the Government Printing Office (GPO) Order Desk at (202) 512-1800
3. Order from the GPO Bookstore at <http://store.gpo.gov/epa/renovate>
4. Request copies in writing from:
U.S. GPO
P.O. Box 979030
St. Louis, MO 63197-9000



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Schenectady County HEPA Vacuum Loan Program Instructions



HEPA Vacuums can be borrowed for 24 to 48 hours. All questions regarding HEPA vacuum loans and operation should be directed to the Schenectady County Lead Primary Prevention Program staff (Jennifer Priebe and Dominick DiCarlo) at (518) 386-2818.

The Borrower agrees to hold harmless Schenectady County Public Health Services from any loss, liability, damage, and costs in relation to the use of the HEPA vacuum. The Borrower is responsible for returning vacuum in same condition that it was received in, along with all attachments.

The vacuum comes with the following attachments; please make sure they are all returned with the vacuum when you borrow it:

- Vacuum unit
- Flexible Hose
- Telescoping Extension tube
- Attachments, including crevice tool, floor tool, dusting brush and upholstery tool

• This vacuum is for general indoor household cleaning only - This vacuum is not intended to be used for clean-up during lead hazard control work or any other intentional disturbance of painted surfaces. It is also not intended to use for clean up of renovation and construction debris. The vacuum can be used for final general cleaning after initial wet cleaning methods have been completed.

• This vacuum is never to be used for clean up of asbestos, mercury, or other hazardous materials.

• Do not vacuum any liquids. This is not a wet/dry vacuum and liquids will cause extensive damage.

• Avoid picking up large or heavy objects which might puncture the vacuum bag.

• Please do not open the machine or remove the bag. Health Department staff will change vacuum bags when necessary. If you feel the bag needs to be changed, use the contact numbers provided in this document.

• Don't try to change the filter. Our staff will clean the vacuum and change the filters once it is returned.

• Avoid removing the hose from the base unit, as this will expose the contents of the bag and increase the chance of dirt falling out. If hose needs to be removed for transportation or storing then carefully remove the hose and tape over the hose opening.

• If the machine does not operate in the way you expect, call us and explain the situation. Do not attempt to service the machine.

NOTICE

This guide was prepared pursuant to section 212 of the Small Business Regulatory

Enforcement Fairness Act of 1996 (SBREFA), Pub. L. 104-121. THIS DOCUMENT IS NOT INTENDED, NOR CAN IT BE RELIED UPON, TO CREATE ANY RIGHTS ENFORCEABLE BY ANY PARTY IN LITIGATION WITH THE UNITED STATES.

The statements in this document are intended solely as guidance to aid you in complying with the Lead-Based Paint Renovation, Repair, and Painting Program requirements in 40 CFR 745, Subpart E. EPA may decide to revise this guide without public notice to reflect changes in EPA's approach to implementing the Lead-Based Paint Renovation, Repair, and Painting Program or to clarify and update text. To determine whether EPA has revised this guide and/or to obtain copies, contact EPA's Small Business Ombudsman at 202-566-2075, or contact the National Lead Information Center at 1-800-424-LEAD(5323), or on the web at www.epa.gov/leadandpaint/ilc.htm.



United States
Environmental Protection
Agency

1-800-424-LEAD (5323)
www.epa.gov/lead



How Do I Use This Vacuum?

- A HEPA vacuum is a tool available to homeowners and renters useful in cleaning lead contaminated surfaces in the home.
- HEPA vacuums differ from regular household vacuums because they have a special filter that traps very fine dust particles that are too small to see. This filter is called a High Efficiency Particulate Air (HEPA) filter.
- HEPA vacuums are helpful in removing lead dust from homes. The use of different attachments allows for more specific cleaning. The extension tube can assist in reaching high places and a special attachment assists with cleaning carpets and rugs.
- Vacuuming with a regular household vacuum will not remove small dust particles in the home that can poison children. Much of the dust that is blown back out the exhaust of the vacuum, which resettles on toys, furniture, and floors where small children become exposed. Regular vacuums don't remove lead dust.
- Many items inside the home can be cleaned using a HEPA vacuum, including ceilings, walls, floors, windows, interior and exterior window sills, doors, heating, ventilation, and air conditioning equipment (heating diffusers, radiators, pipes, vents), fixtures of any kind (light, bathroom, kitchen), built-in cabinets, and appliances.
- Don't let children touch or play with HEPA vacuums.
- If using a HEPA vacuum for the first time, the following cleaning method is recommended:

HEPA Vacuum Cleaning Process

- First, pick up by hand and dispose of any large debris before using the vacuum. This will prevent damaging and clogging the machine.
- Second, collect any visible debris using wet cloths or a vacuum equipped with a HEPA filter before mopping or cleaning. Once you have used the HEPA vacuum, follow up by wet washing hard surface (floor not carpet.) After surfaces have dried from wet washing, use the HEPA vacuum a final time. Use this three-step process to clean one room in the house at a time before moving on to another. Follow up with a regular cleaning schedule using a HEPA vacuum.
- There is a special method for using the HEPA vacuum itself to most effectively remove lead dust from any room in the house. If the whole house is being HEPA vacuumed for the first time, start in the room farthest from the main entrance/exit door so that dirt is not tracked into areas that have already been HEPA cleaned. Then vacuum from room to room, working toward the main exit door and finish there. If only one room is being HEPA vacuumed, work from the farthest area from the door and finish at the doorway.
- In each room, begin HEPA vacuuming at the top of each room (ceiling, walls, and top shelves) and work down to the floor. Do every inch of the windows, especially in the window well where the movable part of the window rests when it is closed. Use special attachments to clean hard-to-reach areas such as baseboards, cracks in the floor boards, walls and woodwork. Move the HEPA vacuum slowly and carefully over surfaces so it can pick up all of the lead dust.

HEPA LOAN AGREEMENT FORM



- HEPA Vacuums can be borrowed for 24 to 48 hours.
- All questions should be directed to the Schenectady County Lead Primary Prevention Program staff (Jennifer Priebe and Dominick DiCarlo) at (518) 386-2818. Please call to check on availability of the vacuums.
- The Borrower agrees to hold harmless Schenectady County Public Health Services from any loss, liability, damage and costs in relation to the use of the HEPA vacuum.

• The Borrower is responsible for returning vacuum in same condition that it was received in, along with all attachments.

• By signing below the Borrower attests that they have received, read, and understands the Schenectady County HEPA Vacuum Loan Program Instructions.

Date Received: _____ Date to be returned: _____

Borrower Name: _____

Address: _____

Contact Number: _____

Borrower Signature: _____

Inspector Name: _____

Inspector Signature: _____

